

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL				5. MINERAL LEASE NO: ML-28042	6. SURFACE: Federal
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: Thurston Energy Operating Company				9. WELL NAME and NUMBER: Thurston 5-15-9-24	
3. ADDRESS OF OPERATOR: PO BOX 240 CITY Vernal STATE UT ZIP 84078			PHONE NUMBER: (435) 789-2653		
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1963' FNL & 463' FWL AT PROPOSED PRODUCING ZONE: SAME AS ABOVE				10. FIELD AND POOL, OR WILDCAT: Undesignated Wildcat	
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 15 9S 24E				12. COUNTY: Uintah	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 38.1 miles South of Vernal, UT				13. STATE: UTAH	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 463'		16. NUMBER OF ACRES IN LEASE: 616.59		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 3,100'		19. PROPOSED DEPTH: 8,000		20. BOND DESCRIPTION: 0269434510	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5313.1		22. APPROXIMATE DATE WORK WILL START: 12/31/2005		23. ESTIMATED DURATION: 30 DAYS	

24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT		
12 1/4	8 5/8	J-55	36#	2,000	PREMIUM LITE II	250 SX	3.38 CF 11.0 PPG
					CLASS "G"	329 SX	1.2 CF 15.6 PPG
					CALCIUM CHLORIDE	200 SX	1.10 CF 15.6 PPG
7 7/8	4 1/2	N-80	11.6#	8,000	PREMIUM LITE II	200 SX	3.3 CF 14.3 PPG

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) **WILLIAM A RYAN** TITLE **AGENT**

SIGNATURE *William A Ryan* DATE **11/14/2005**

CONFIDENTIAL

(This space for State use only)

API NUMBER ASSIGNED: **43-647-37405**

Approved by the
Utah Division of
Oil, Gas and Mining

Date: **01-23-05**

By: *[Signature]*

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DIV. OF OIL, GAS & MINING

T9S, R24E, S.L.B.&M.

THURSTON ENERGY OPERATING COMPANY

Found 1977 Brass
Cap 0.4' above
ground. Pile of
Stones

S89°59'W - 39.95 (G.L.O.)

N89°59'34"W - 2637.13' (Meas.)

S89°35'W - 39.67 (G.L.O.)

Found 1977 Brass
Cap 1' above ground.
Steel post 5 NELY.

N0°07'W - 80.28 (G.L.O.)
N00°06'38"W - (Basis of Bearings) 5298.60' (Measured)

1963'

463' Proposed Well

**WELL LOCATION:
THURSTON 5-15-9-24**

ELEV. UNGRADED GROUND = 5316.4'

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1/4 Corner not
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Lot 1

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M.S. 5221

Lot 3

Lot 4

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Lot 2

M.S. 5221

M.S. 5220

N89°48'54"W - 2624.67' (Meas.)

N89°51'W - 39.76 (G.L.O.)

Found 1977
Brass Cap.
Pile of
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S89°51'26"W - 2622.78' (Meas.)

S89°51'W - 39.73 (G.L.O.)

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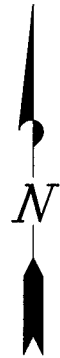
N0°04'W - 40.28 (G.L.O.)

N0°00'06"W - 2621.41' (Meas.)
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WELL LOCATION, THURSTON 5-15-9-24,
LOCATED AS SHOWN IN THE SW 1/4 NW
1/4 OF SECTION 15, T9S, R24E, S.L.B.&M.
UINTAH COUNTY, UTAH.

NOTES:

1. Well footages are measured at right angles to the Section Lines.
2. Bearings are based on Global Positioning Satellite observations.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS
MADE BY ME OR UNDER MY SUPERVISION AND THAT
THE SAME ARE TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF.
KOLBY R. KAY

REGISTERED LAND SURVEYOR
REGISTRATION NO. 362251
STATE OF UTAH

▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS BENCH MARK 46 EAM LOCATED IN
THE SW 1/4 OF SECTION 23, T9S, R24E, S.L.B.&M. THE
ELEVATION OF THIS BENCH MARK IS SHOWN ON THE
BONANZA 7.5 MIN. QUADRANGLE AS BEING 5550'.

**THURSTON 5-15-9-24
(Proposed Well Head)
NAD 83 Autonomous**

LATITUDE = 40° 02' 16.0"
LONGITUDE = 109° 12' 28.7"

TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078
(435) 789-1365

DATE SURVEYED: 10-15-05	SURVEYED BY: K.R.K.	SHEET 2 OF 10
DATE DRAWN: 10-29-05	DRAWN BY: J.R.S.	
SCALE: 1" = 1000'	Date Last Revised:	

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DIV. OF OIL, GAS & MINING

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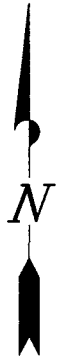
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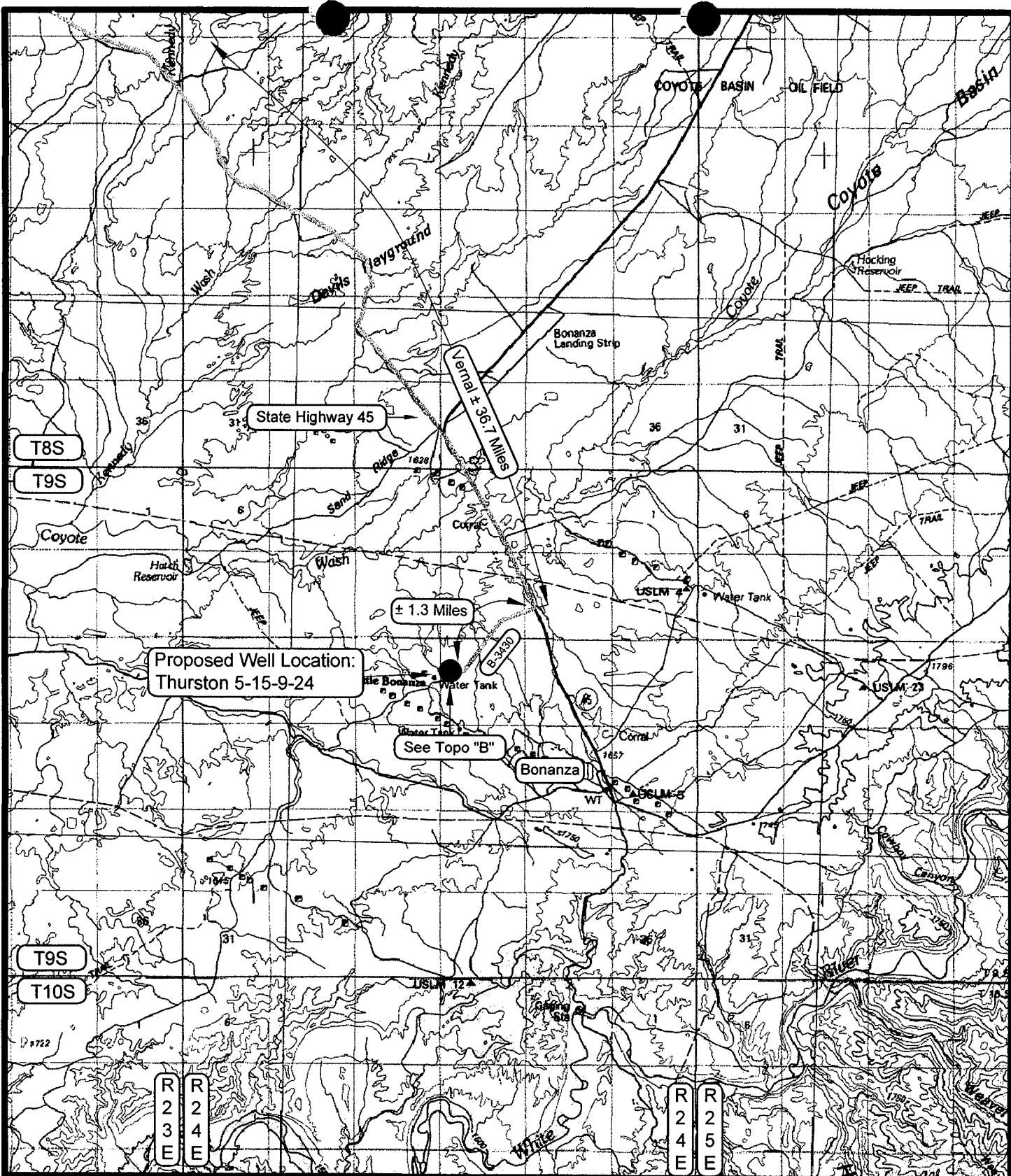
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SCALE: 1" = 1000'	Date Last Revised:	



LEGEND

- = PROPOSED WELL LOCATION
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD
- (B-3430) = COUNTY ROAD CLASS & NUMBER

TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 10-31-05

REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

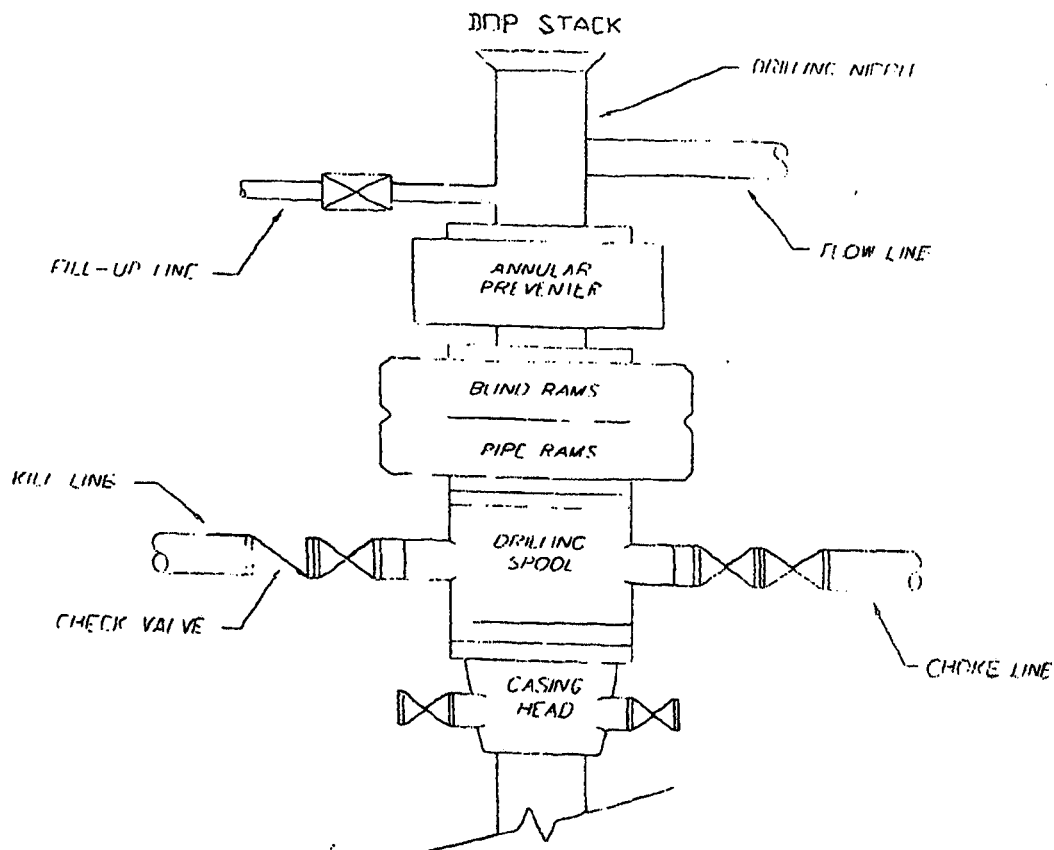
Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
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 38 West 100 North Vernal, Utah 84078
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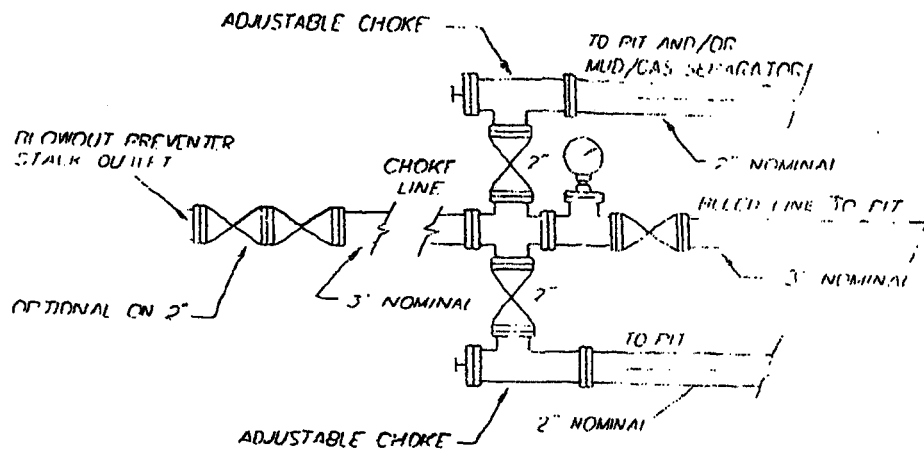
SHEET
7
OF 10

THE HOUSTON EXPLORATION COMPANY

TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC



**APPLICATION FOR TRANSPORTATION AND
UTILITY SYSTEMS AND FACILITIES
ON FEDERAL LANDS**

FORM APPROVED
OMB NO. 1004-0060
Expires: December 31, 2001

FOR AGENCY USE ONLY

NOTE: Before completing and file application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with help of the representative, the application can be completed at the application meeting.

Application Number

Date Filed

1 Name and address of the applicant (include Zip code)
**Thurston Energy Operating Co.
2754 W. Hwy. 40
Vernal, UT 84078**

2 Name, title, and address of authorized agent if different from item 1 (include zip code)
**William A Ryan
290 S 800 E
Vernal, UT 84078**

3 TELEPHONE (area code)

Applicant

435-789-2653

Authorized Agent

435-789-0968

4

- a ☐ Individual
b ☒ Corporation*
c ☐ Partnership/Association*
d ☐ State Government/State Agency
e ☐ Local Government
f ☐ Federal Agency

* If checked complete supplemental page

6 If an individual, or partnership are you a citizen(s) of the United States?

7 Project description (describe in detail): (a) Type of system or facility, e.g., canal, pipeline, road);(b) related structures and facilities; (c) physical specifications (length, width, grade, etc.); (d) term of years needed; (e) time of year of use or operation; (f) Volume or amount of production to be transported; (g) duration and time of construction; and (h) temporary work area needed for construction (Attach additional sheets, if additional space is needed.)
Please see attached A.P.D.

8 Attach a map covering area and show location of proposal

9 State or Local government approval ☐ Attached ☒ Applied for ☐ Not Required

10 Nonreturnable application fee: ☒ Attached ☐ Not Required

11 Does Project cross international or affect international waterways? ☐ Yes ☒ No

12 Give statement of your technical and financial capability to conduct, operate, maintain, and terminate system for which authorization is being requested

Thurston Energy Operating Company has the financial capability to construct, operate, maintain, and terminate the proposed drilling program

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DIV. OF OIL, GAS & MINING

13 a Describe other reasonable alternative routes and modes considered.

None were considered

b Why were these alternatives not selected

Please see attached APD.

c Give explanation as to why it is necessary to cross Federal Lands.

To access State minerals located below Federal surface

14 List authorization and pending application filed for similar projects which may provide information to authorizing agency. (specify number, date, code, or name)

An Application for Permit to Drill has been filed with the State of Utah Division of oil, Gas and Mining.

15 Provide statement of need for project, including the economic feasibility and items as: (a) cost of proposal (construction, operation, and maintenance); (b) estimated cost of next best alternative; and (c) expected public benefits.

a. Please see attached APD.

b. Please see attached APD.

16 Describe probable effects on the population in the area, including the social and economic aspects, and the rural lifestyles.

There will be no significant impacts on the areas population, social or economic aspects or the rural lifestyle from the proposed project.

17 Describe likely environmental effects project will have on: (a) air quality; (b) visual impacts; (c) surface and ground water quality and Quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land including vegetation, permafrost, soil, and soil stability.

a. minimal

d. no change

b. minimal

e. minimal

c. minimal

f. minimal

18 Describe the probable effects that the proposed project will have on (a) populations of fish, plantlike, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

a. There will be little or no impacts on fish, plantlife, wildlife, and threatened and endangered species

b. NA

19 State whether any hazardous material, as defined in this paragraph, will be used, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous Material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does **not** include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or described as a hazardous substance, under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

Please see attached APD.

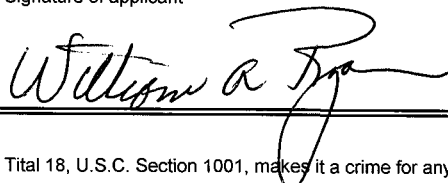
20 Name all the Department(s)/Agency(ies) where this application is being filed.

Bureau of Land Management, Vernal Field Office. Vernal, UT

Cc: Utah Division of Oil, Gas and Mining.

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of applicant



Date

11/14/2005

Titl 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the Utah States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

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DIV. OF OIL, GAS & MINING

Ten Point Plan

Thurston Energy Operating Company

Thurston 5-15-9-24

Surface Location SW ¼ NW ¼, Section 15, T. 9S., R. 24E.

1. Surface Formation

Green River

2. Estimated Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	Surface	+5,313' G.L.
Uteland Butte Limestone	3,545	+1,768'
Wasatch	3,635	+1,678'
Mesaverda	5,385	-72'
Buck Tounge	6,810	-1,497'
Castlegate	6,880	-1,567'
TD	8,000	-2,687'

A 11" hole will be drilled to 2,000' +/- . The hole depth will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

3. Producing Formation Depth:

Formation objective includes the Green River, Wasatch, Mesaverde and its sub-members.

Off Set Well information

Permitted/Drilled:

Thurston 10-15-9-24

Producing Wells:

Bonanza #4D-16

Abandon Wells:

Bonanza 14-16

Bonanza 2B-16

Dirty Devil U 1-9

State 14-16

Shut in Well:

Dirty Devil 31-15 A

Water Well:

Federal 14-10

4. Proposed Casing:

Hole Size	Casing Size	Weight/FT	Grade	Coupling & Tread	Casing Depth	New/Used
11	8 5/8	36#	J-55	STC	2000	NEW
7 7/8	4 1/2	11.6#	N-80	LTC	T.D.	NEW

Cement Program:

The Surface Casing will be cemented to the Surface as follows:

	Casing Size	Cement Type	Cement Amounts	Cement Yield	Cement Weight
Lead:	8 5/8	Premium Lite II .05#/sk Static Free .25#/sk Cello Flake 5#/sk KOL Seal .002 gps FP-6L 10% Bentonite .5% Sodium Metasilicate 3% Potassium Chloride	250 sks. +/-	3.38ft ³ /sk	11.0 ppg
Tail:	8 5/8	Class "G" 2% Calcium Chloride .25#/sk Cello Flake	329 sks. +/-	1.2ft ³ /sk	15.6 ppg
Top Job:	8 5/8	4% Calcium Chloride .25#/sk Cello Flake	200 sks. +/-	1.10ft ³ /sk	15.6 ppg

Production casing will be cemented to 2,500' or higher as follows:

	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:	4 1/2	Premium Lite II .25#/sk Cello Flake .05#/sk Static Free 5#/sk Kol Seal 3% Potassium Chloride .055 gps FP-6L 10% Bentonite .5 Sodium Metasilicate	200 sks +/-	3.3ft ³ /sk	11.0 ppg
Tail:	4 1/2	Class "G" .05% Static Free 2 Sodium Chloride .1% R-3 2% Bentonite	400 sks +/-	1.56ft ³ /sk	14.3 ppg

5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 8 5/8" surface casing. The BOP system including the casing will be pressure tested to minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./OT.</u>	<u>Fluid Loss Ml/30 Mins.</u>	<u>Mud Type</u>
0-2000	Air/Clear Water	-----	No Control	Water/Gel
2000-T.D.	8.4-12.0	30	8-10	Water/Gel

7. Auxiliary Equipment

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

8. Testing, Coring, Sampling and Logging:

- a) Test: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Sampling: Every 10' from 2000' to T.D.
- d) Logging:

Type	Interval
DLL/SFL W/GR and SP	T.D. to Surf. Csg
FDC/CNL W/GR and CAL	T.D. to Surf. Csg

9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch Formation. Other wells drilled in the area have not encountered over pressured zones or H₂S.

10. Drilling Schedule:

The anticipated starting date is 12/14/05. Duration of operations is expected to be 30 days.

THURSTON ENERGY OPERATING COMPANY

13 POINT SURFACE USE PLAN

FOR WELL

THURSTON 5-15-9-24

LOCATED IN SW $\frac{1}{4}$ NW $\frac{1}{4}$

SECTION 15, T.9S, R24E, S.L.B.&M.

UINTAH COUNTY, UTAH

LEASE NUMBER: ML-28042

SURFACE OWNERSHIP: FEDERAL

1. Existing Roads:

Thurston Energy Operating CO

Thurston #5-15-9-24

Section 15, T9S, R24E

Starting in Vernal, Utah:

Proceed in an easterly, then southerly direction from Vernal, Utah along US Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 33.4 miles to the junction of the Little Bonanza Road, County B Road 3430; exit right and proceed in a southwesterly direction along the Little Bonanza road approximately 1.3 miles to the proposed access road; follow road flags in a northwesterly direction approximately 460 feet to the proposed location.

Total distance from Vernal, Utah to the proposed well location is approximately 38.1 miles.

All existing roads to the proposed location are State of Utah, BLM maintained or County Class D roads. Please see the attached map for additional details.

2. Planned access road

The proposed access road will be approximately 2,415' +/- of new construction on lease. The road

will be graded once per year minimum and maintained.

A) Approximate length	460 ft
B) Right-of-Way width	30 ft
C) Running surface	18 ft
D) Surface material	Native soil
E) Maximum grade	5%
F) Fence crossing	None
G) Culvert	None
H) Turnouts	None
I) Major cuts and fills	None
J) Road Flagged	Yes
K) Access road surface ownership	Federal
L) All new construction on lease	Yes
M) Pipe line crossing	No

Please see the attached location plat for additional details.

An off lease Right-of-Way will not be required.

All surface disturbances for the road and location will be within the lease boundary.

3. Location of existing wells

The following wells are located within a one-mile radius of the location site.

A) Producing well	
Bonanza 4D-16	
B) Water well	None
C) Abandoned well	
State 14-16	
Dirty Devil U 1-9	
Bonanza 2B-16	
Bonanza 14-16	
D) Temp. abandoned well	None
E) Disposal well	
Federal 14-10	

- F) **Drilling /Permitted well**
Thurston 10-15-9-24
G) **Shut in wells**
Dirty Devil 31-15A
H) **Injection well** **None**
I) **Monitoring or observation well** **None**

Please see the attached map for additional details.

4. Location of tank batteries, production facilities and production gathering service lines.

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Carlsbad Canyon** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded. The required paint color is **Carlsbad Canyon**.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulation identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, commingling on lease or off lease, of production, will have

prior written approval from the authorized officer.

If the well is capable of economic production a surface gas line will be required.

Approximately 2,740' +/- of 3" surface pipeline would be constructed on Federal Lands. The pipeline will tie into the existing pipeline in Sec 15, T9S, R24E. The pipeline will be strung and boomed to the east of the location and parallel to the access roads.

An off lease Right-of-Way will not be required.

Please see the attached location diagrams for pipeline location. There will be no additional surface disturbances required for the installation of a gathering line.

The gas meter run will be located within 500' of the wellhead. The gas line will be buried or anchored down from the wellhead to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office and State of Utah,

Division of Oil, Gas, and Mining.
All measurement facilities will conform to API (American Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. Location and type of water supply

Water for drilling and cementing will come from The White River at the Bonanza Bridge, Permit # - T75376.

6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. Additional road gravel or pit lining material will be obtained from private resources.

7. Methods for handling waste disposal

A) Pit construction and liners:

The reserve pit will be approximately **12 ft.** deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined.

The reserve pit will be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac

tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. During the 90-day period an application for approval for permanent disposal method and location will be submitted to the authorized officer.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized landfill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste.

E) Site clean-up:

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout

Location dimensions are as follows:

A) Pad length	345 ft
B) Pad width	260 ft
C) Pit depth	12 ft
D) Pit length	150 ft
E) Pit width	75 ft
F) Max cut	14.7 ft
G) Max fill	6.6 ft
H) Total cut yds.	6,860 cu yds
I) Pit location	South end
J) Top soil location	West end
K) Access road location	East end
L) Flare Pit	corner C

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.

E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately **1,500** cubic yards of material.

Topsoil will be stockpiled in one distinct pile. Placement of the topsoil is noted on the attached location plat. The topsoil pile from the location will be seeded as soon as the soil is stock piled with the seed mix listed. When all drilling and completion activities have been completed and the pit back-filled the topsoil from the pit area will be spread on the pit area. The pit area will be seeded when the soil has been spread. The unused portion of the location (the area outside the dead men) will be re-contoured.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow or as near as possible when the pit is back-filled

All disturbed areas will be re-contoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert the run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified. And left with a rough surface.

A) Seeding dates:

Seed will be spread when topsoil is stock piled and when reclamation work is performed.

The seed mix and quantity list will be used whether the seed is broadcast or drilled.

B) Seed Mix:
To be determined by the
Authorized Officer.

11. Surface ownership:

Access road	Federal
Location	Federal
Pipe line	Federal

12. Other information:

A) Vegetation

The vegetation coverage is Slight. The majority of the existing vegetation consists of Sagebrush. Rabbit brush, Bitter Brush, and Indian Rice grass are also found on the location.

B) Dwellings:

There are no dwelling or other facilities within a one-mile radius of the location.

C) Archeology:

The location has been surveyed. A copy of that survey will be forwarded to your office.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

D) Water:

The nearest water is the White River located approximately 5 miles to the South.

E) Chemicals:

No pesticides, herbicides or other possible hazardous chemicals will be used without prior application.

F) Notification:

- a) Location Construction
At least forty eight (48) hours prior to construction of location and access roads.
- b) Location completion
Prior to moving on the drilling rig.
- c) Spud notice
At least twenty-four (24) hours prior to spudding the well.
- d) Casing string and cementing
At least twenty-four (24) hours prior to running casing and cementing all casing strings.
- e) BOP and related equipment tests
At least twenty-four (24) hours prior to initial pressure tests.
- f) First production notice
Within five (5) business days after the new well begins, or production resumes after well has been off production for more than 90 days.

G) Flare pit:

The flare pit will be located in **corner C** of the reserve pit outside the pit fences and 100 feet from the bore hole on the east side of the location. All fluids will be removed from the pit within 48 hours of occurrence.

13. Lessees or Operator's representative and certification

A) Representative

William A. Ryan
Rocky Mountain Consulting
Vernal, UT 84078

Office 435-789-0968
Fax 435-789-0970
Cellular 435-828-0968

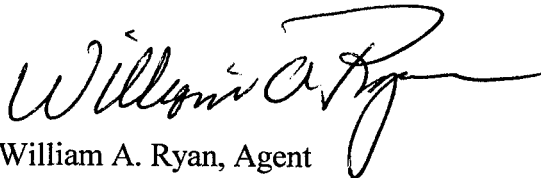
All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, onshore oil and gas orders, and any applicable notices to lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be preformed by Thurston Energy Operating Company and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date 11/15/05

A handwritten signature in black ink, appearing to read "William A. Ryan", with a long horizontal flourish extending to the right.

William A. Ryan, Agent
Rocky Mountain Consulting

Onsite Dates:

Statement of use of Hazardous Materials

No chemical(s) from the EPA's consolidated list of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization, Act (SARA) of 1986 will be used, produced, transported, stored, disposed, or associated with the proposed action. No extremely hazardous substances, as defined in 40 cfr 355, will be used, produced, stored, transported, disposed, or associated with the proposed action.

If you require additional information please contact:

William A Ryan
Agent for Thurston Energy Operating CO
290 S 800 E
Vernal, UT 84078

435-789-0968 Office
435-828-0968 Cell

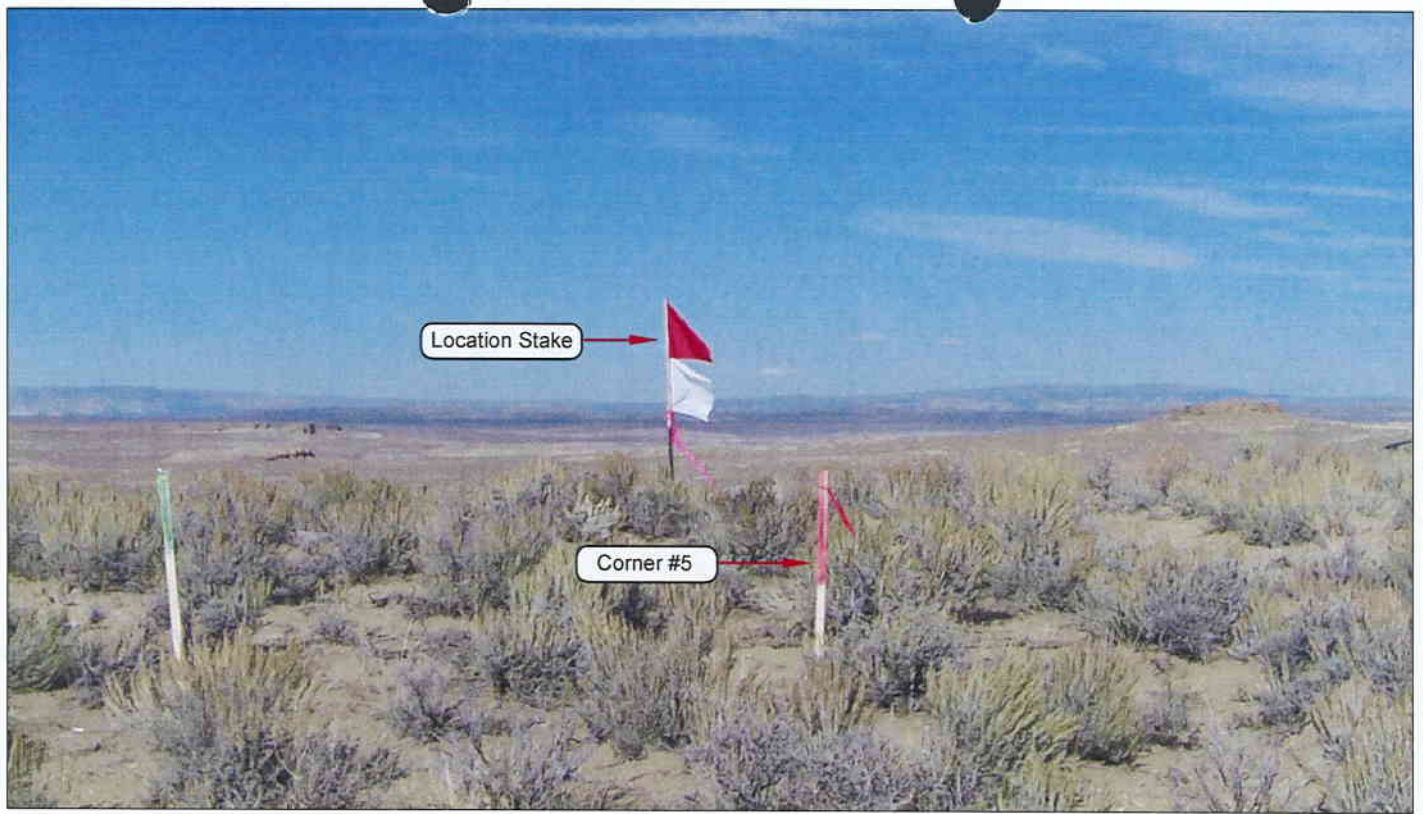


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

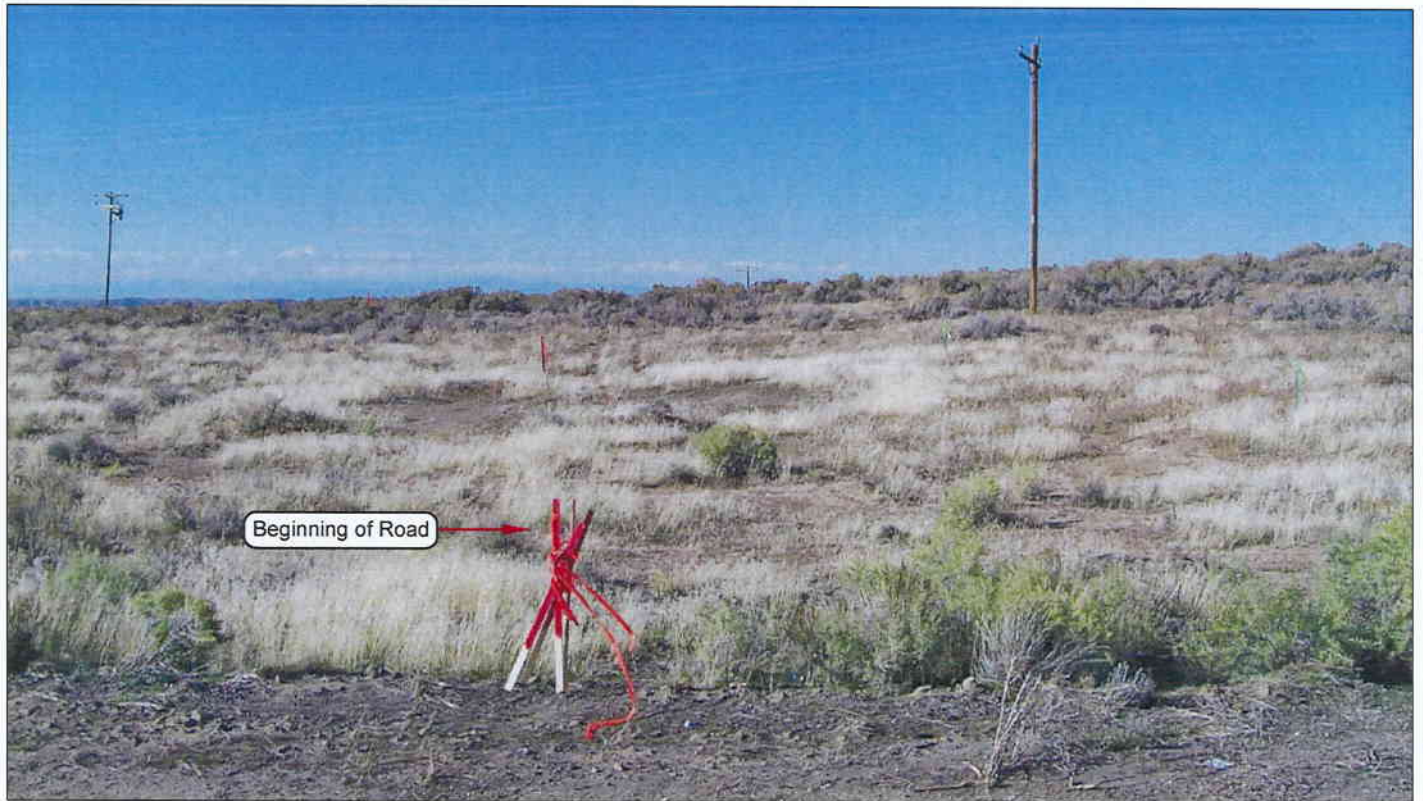


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15 , T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

LOCATION PHOTOS

TAKEN BY: K.R.K.

DRAWN BY: B.J.Z.

DATE TAKEN: 10-15-05

DATE DRAWN: 11-01-05

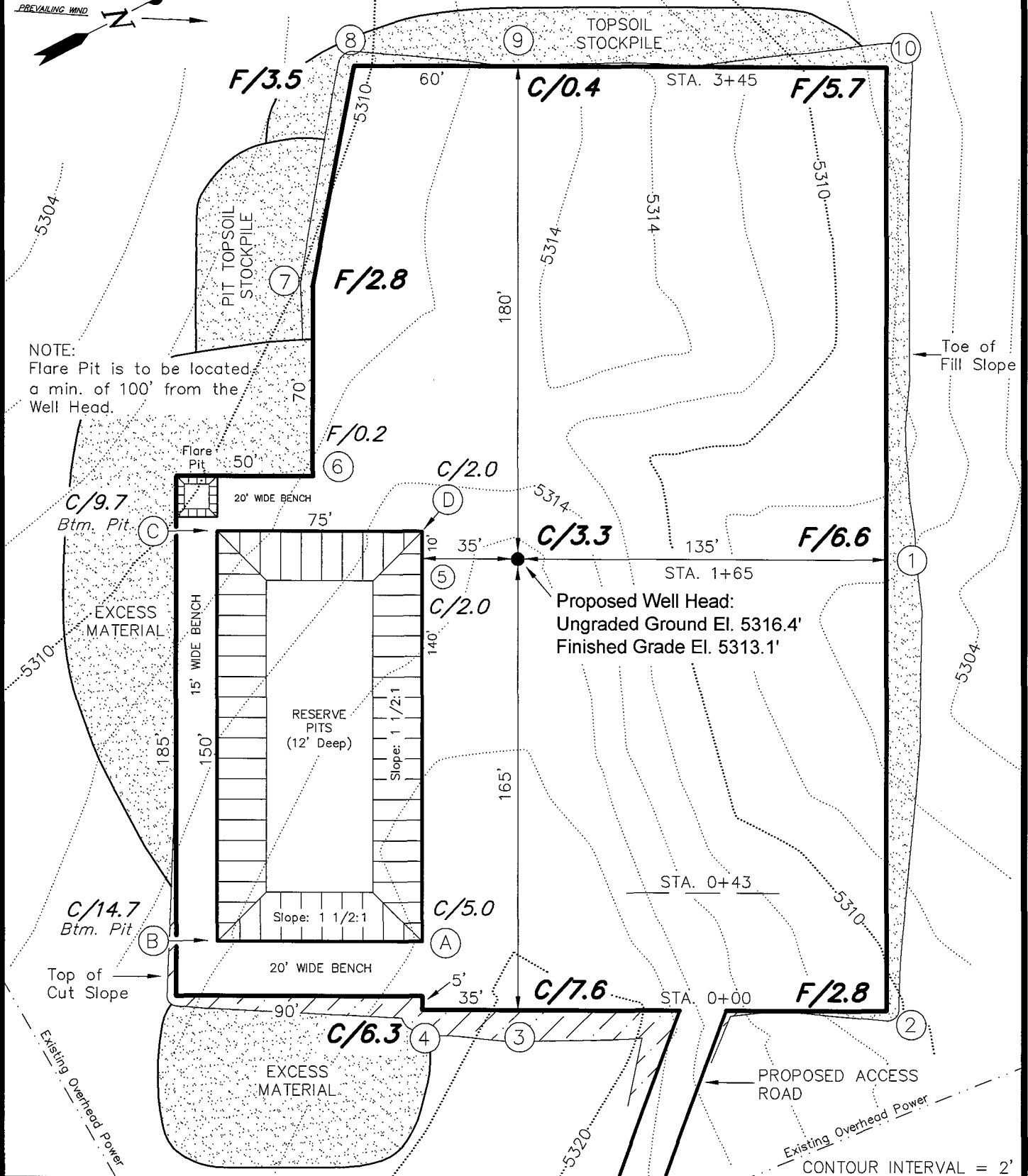
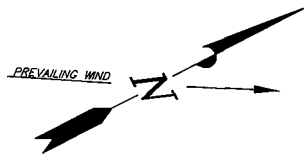
REVISED: 11-02-05 B.J.Z.

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
1
OF 10

THURSTON ENERGY OPERATING COMPANY

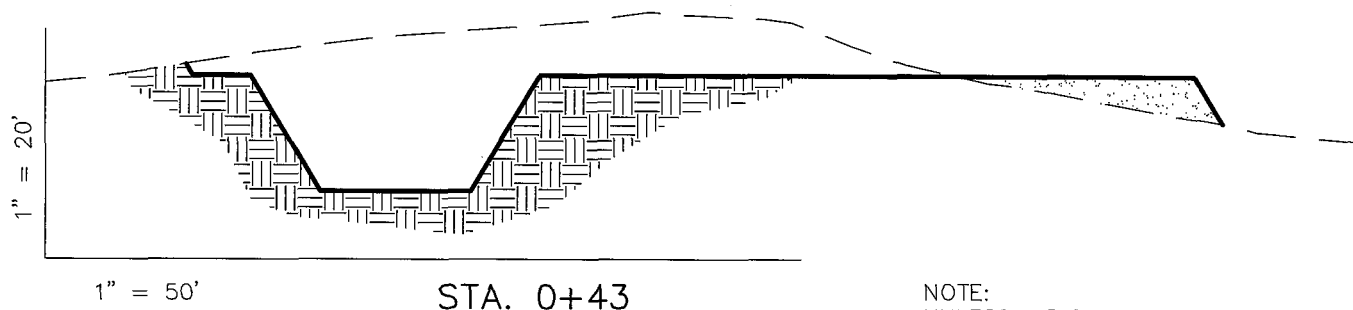
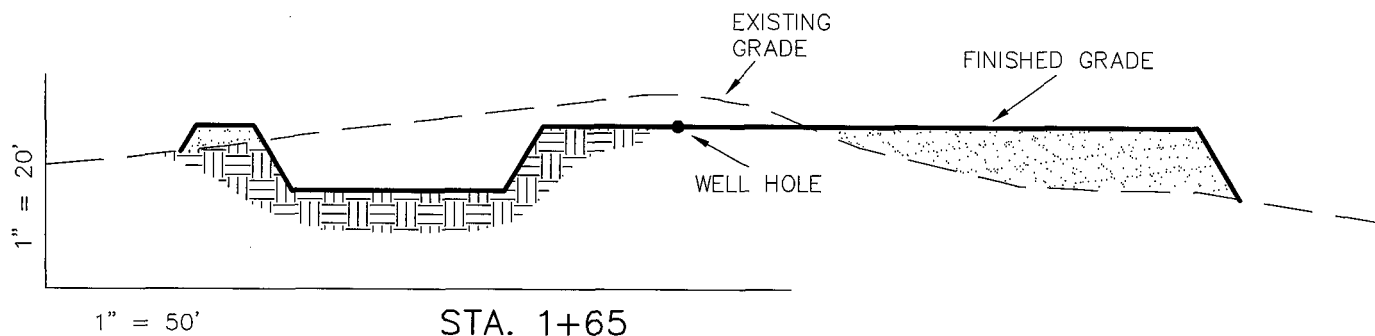
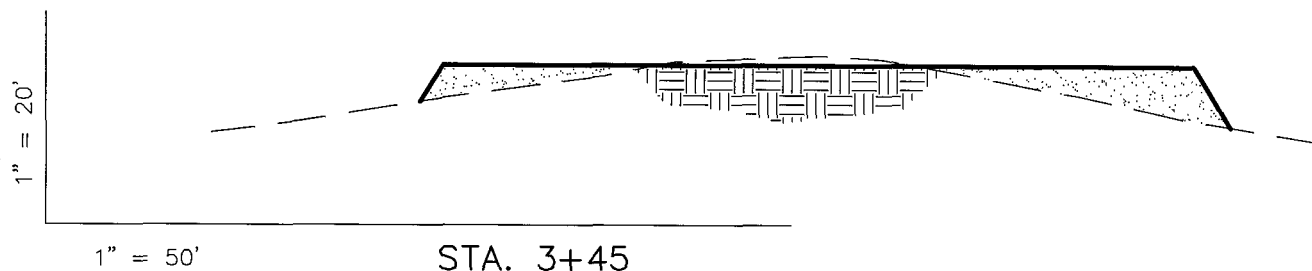
CUT SHEET
THURSTON 5-15-9-24



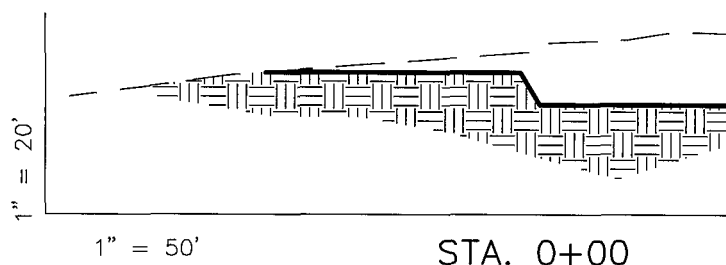
Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW	Footage Location: 1963' FNL & 463' FWL
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	Timberline (435) 789-1365
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078			SHEET 3 OF 10

THURSTON ENERGY OPERATING COMPANY

CROSS SECTIONS THURSTON 5-15-9-24



NOTE:
UNLESS OTHERWISE NOTED
ALL CUT/FILL SLOPES ARE
AT 1.5:1



Pit overburden is included in pad cut.

ESTIMATED EARTHWORK QUANTITIES (No shrink or swell adjustments have been used) (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	3,520	5,190	Topsoil is not included in Pad Cut	-1,670
PIT	3,340	0		3,340
TOTALS	6,860	5,190	1,500	1,670

Excess Material after Pit Rehabilitation = 0 Cu. Yds.

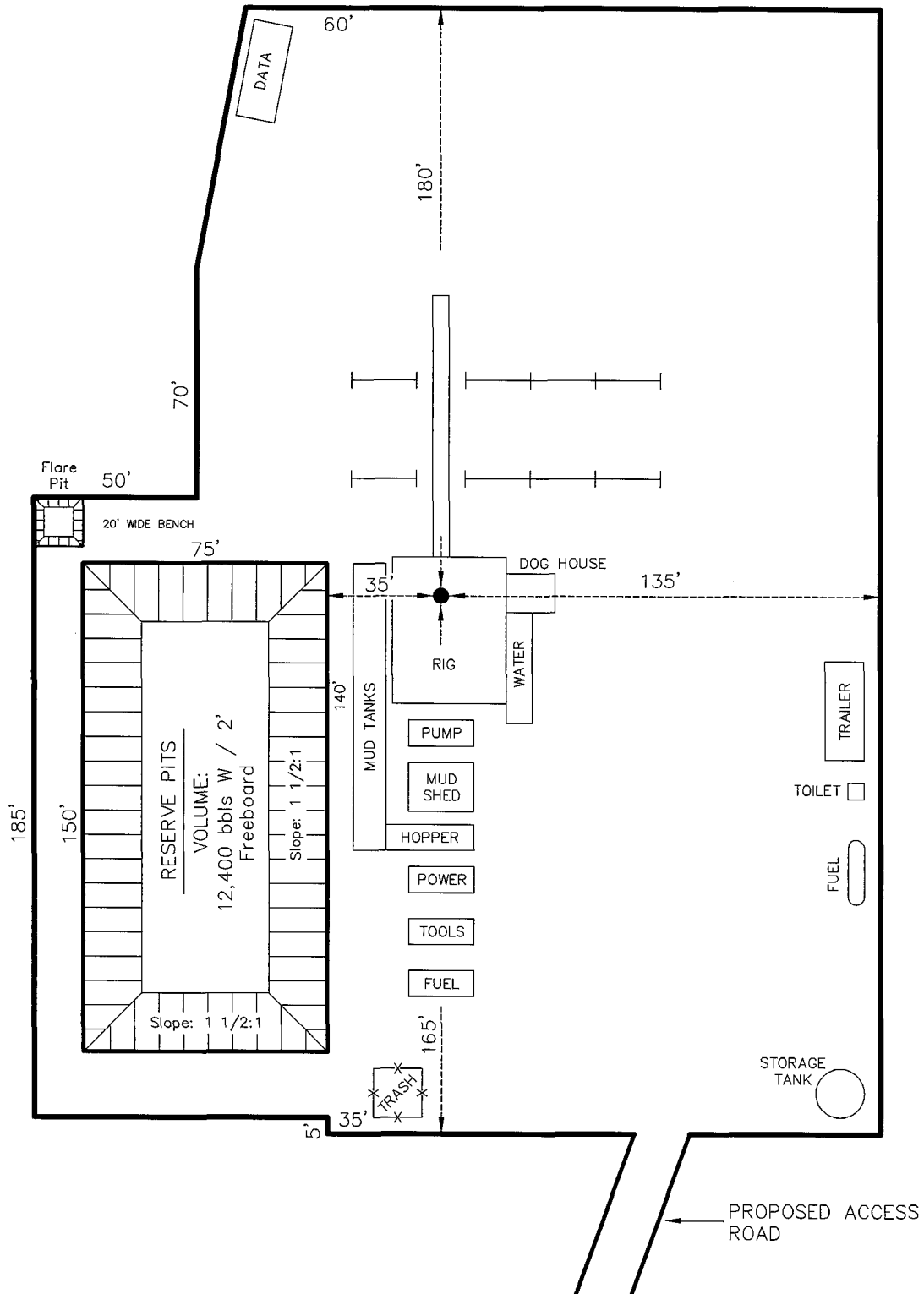
REFERENCE POINTS

185' NORTHEASTERLY = 5303.3'
235' NORTHEASTERLY = 5298.6'
230' NORTHWESTERLY = 5313.9'
280' NORTHWESTERLY = 5313.0'

Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW		Footage Location: 1963' FNL & 463' FWL	
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	<i>Timberline</i> (435) 789-1365 <i>Land Surveying, Inc.</i> 38 WEST 100 NORTH VERNAL, UTAH 84078		SHEET 4 OF 10
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'			

THURSTON ENERGY OPERATING COMPANY

TYPICAL RIG LAYOUT THURSTON 5-15-9-24

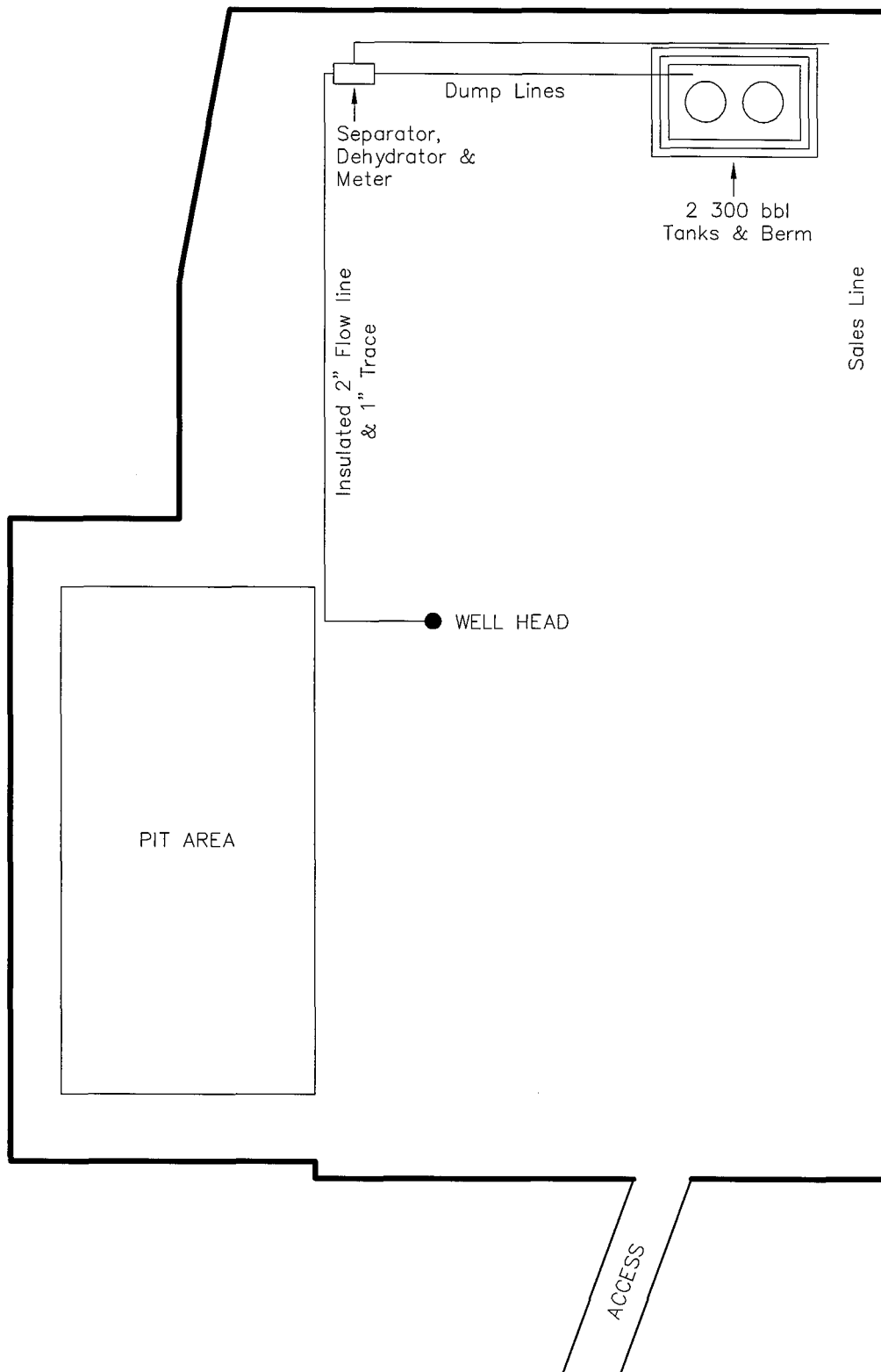


Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW		Footage Location: 1963' FNL & 463' FWL	
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	<i>Timberline</i> (435) 789-1365 <i>Land Surveying, Inc.</i> 38 WEST 100 NORTH VERNAL, UTAH 84078		SHEET 5 OF 10
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'			

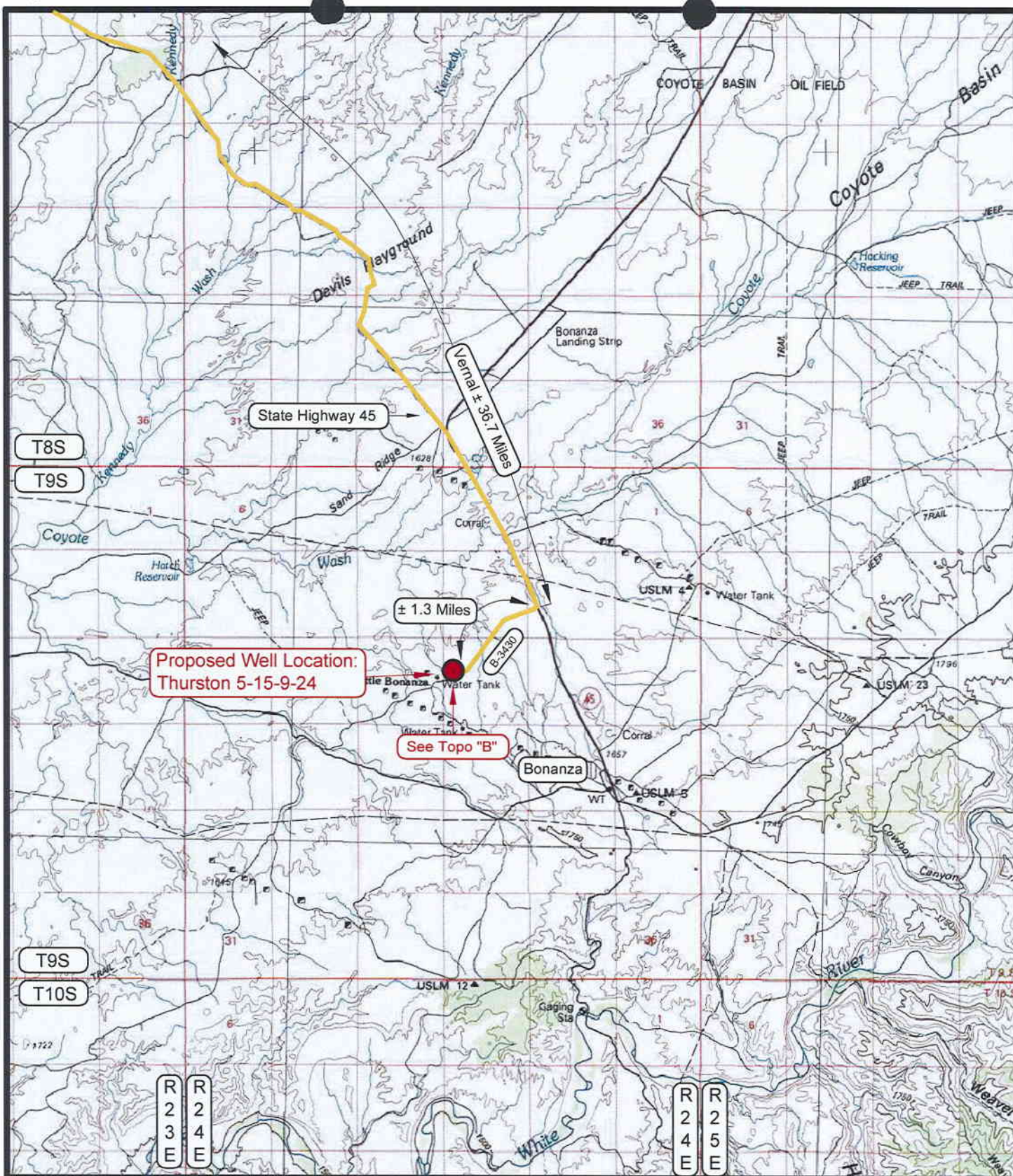
THURSTON ENERGY OPERATING COMPANY

TYPICAL PRODUCTION LAYOUT

THURSTON 5-15-9-24



Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW	Footage Location: 1963' FNL & 463' FWL
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	Timberline (435) 789-1365 <i>Land Surveying, Inc.</i> 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	
			SHEET 6 OF 10



LEGEND

- = PROPOSED WELL LOCATION
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD
- B-3430 = COUNTY ROAD CLASS & NUMBER

TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 10-31-05

REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

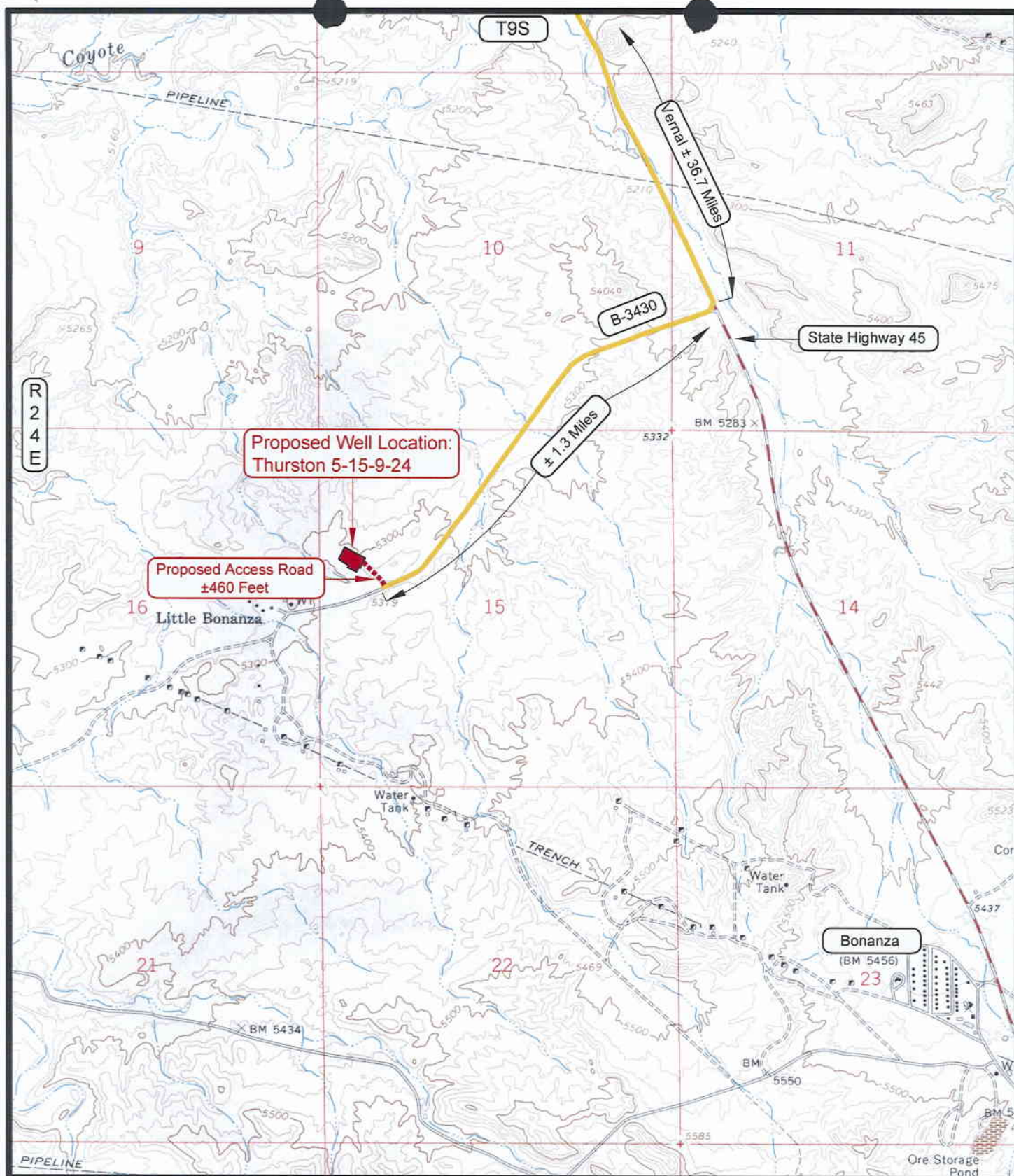
Timberline Land Surveying, Inc.

38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET

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OF 10



LEGEND

- PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = SHARED ACCESS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- (B-5460) = COUNTY ROAD CLASS & NUMBER
- = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-1-05

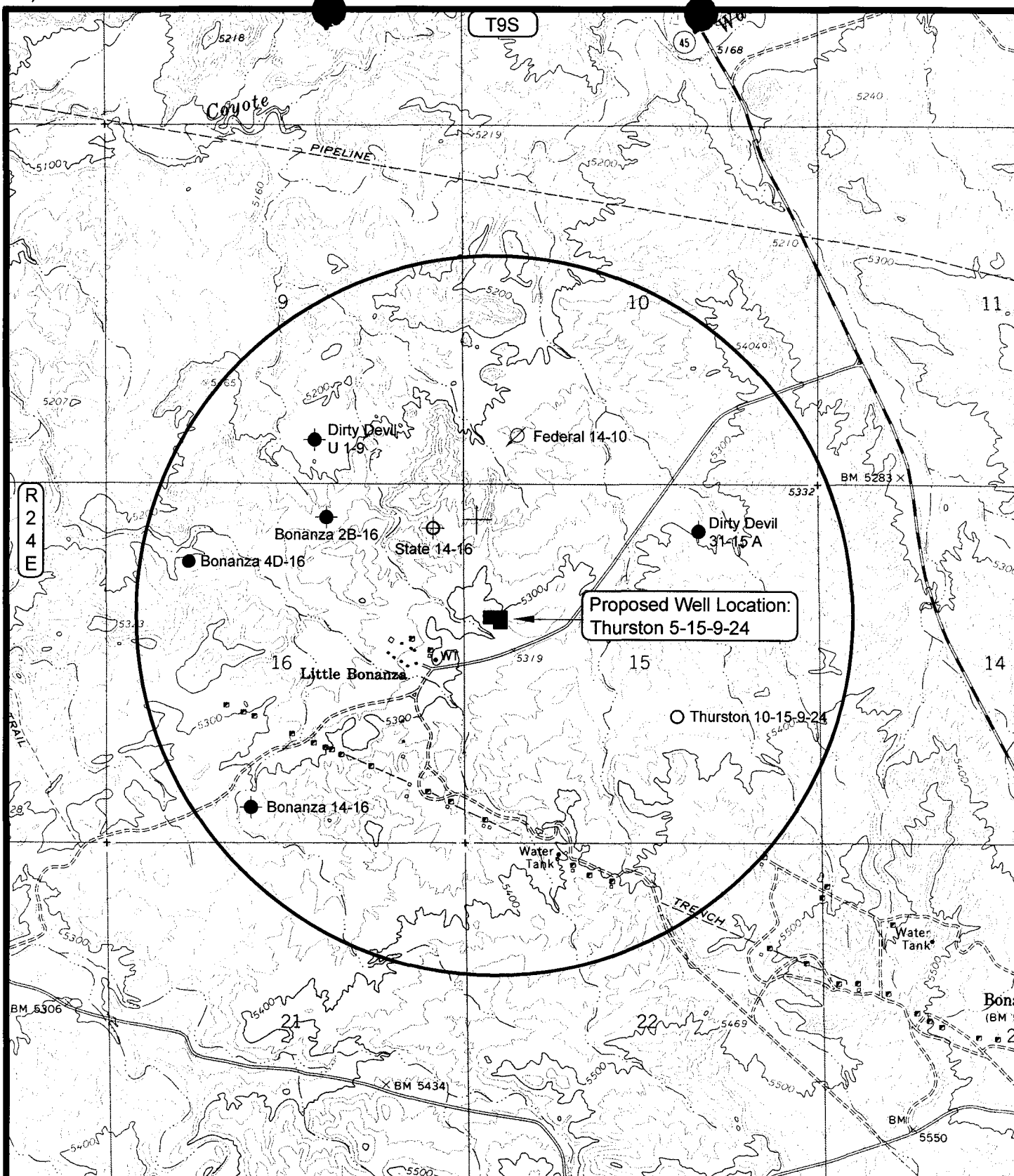
REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

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 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
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OF 10



LEGEND

- | | |
|--------------------|--------------------------------|
| ○ = DISPOSAL WELL | ⊗ = WATER WELL |
| ● = PRODUCING WELL | ● = ABANDONED WELL |
| ● = SHUT IN WELL | ● = TEMPORARILY ABANDONED WELL |
| ○ = PROPOSED WELL | ⊕ = ABANDONED LOCATION |

TOPOGRAPHIC MAP "C"

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-01-05

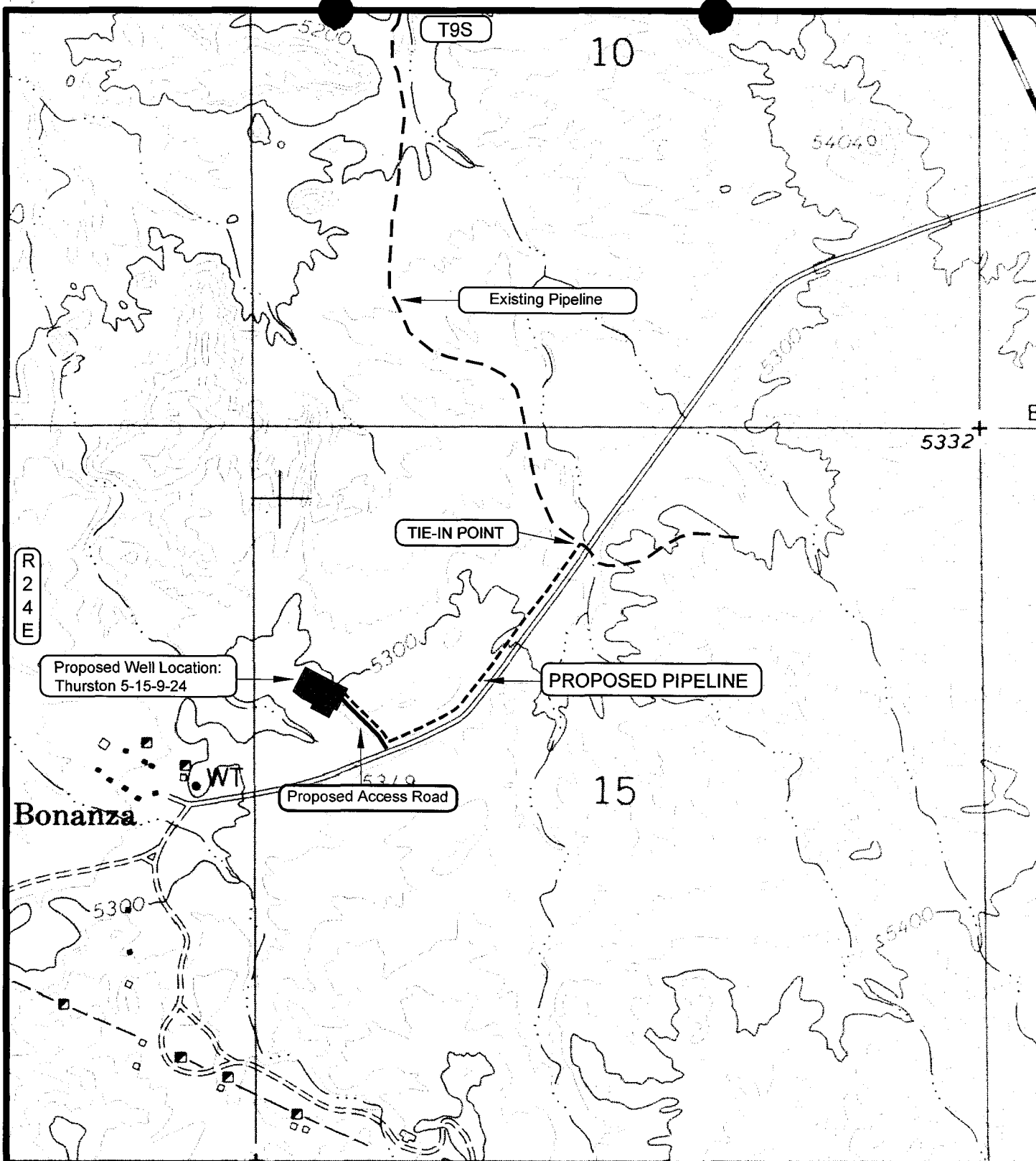
REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

Timberline Land Surveying, Inc.
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SHEET
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OF 10



APPROXIMATE PIPELINE LENGTH = 2,500 FEET

LEGEND

- = EXISTING PIPELINE
- = PROPOSED PIPELINE
- = PROPOSED ACCESS ROAD
- = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "D"

SCALE: 1" = 1000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-01-05

REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24

SECTION 15, T9S, R24E, S.L.B.&M.

1963' FNL & 463' FWL

Timberline Land Surveying, Inc.

38 West 100 North Vernal, Utah 84078
(435) 789-1365

SHEET

10

OF 10

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/18/2005

API NO. ASSIGNED: 43-047-37405

WELL NAME: THURSTON 5-15-9-24

OPERATOR: THURSTON ENERGY (N2790)

CONTACT: BILL RYAN

PHONE NUMBER: 435-789-0968

PROPOSED LOCATION:

SWNW 15 090S 240E

SURFACE: 1963 FNL 0463 FWL

BOTTOM: 1963 FNL 0463 FWL

UINTAH

WILDCAT (1)

LEASE TYPE: 3 - State

LEASE NUMBER: ML-28042

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: CSLGT

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DKO	11/22/05
Geology		
Surface		

LATITUDE: 40.03770

LONGITUDE: -109.2075

RECEIVED AND/OR REVIEWED:

☒ Plat
☒ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 0269435277)
☒ Potash (Y/N)
☒ Oil Shale 190-5 (B) or 190-3 or 190-13
☒ Water Permit
(No. T75376)
☒ RDCC Review ☒ (Y/N)
(Date: 12/06/2005)
☒ Fee Surf Agreement (Y/N)
☒ Intent to Commingle (Y/N)

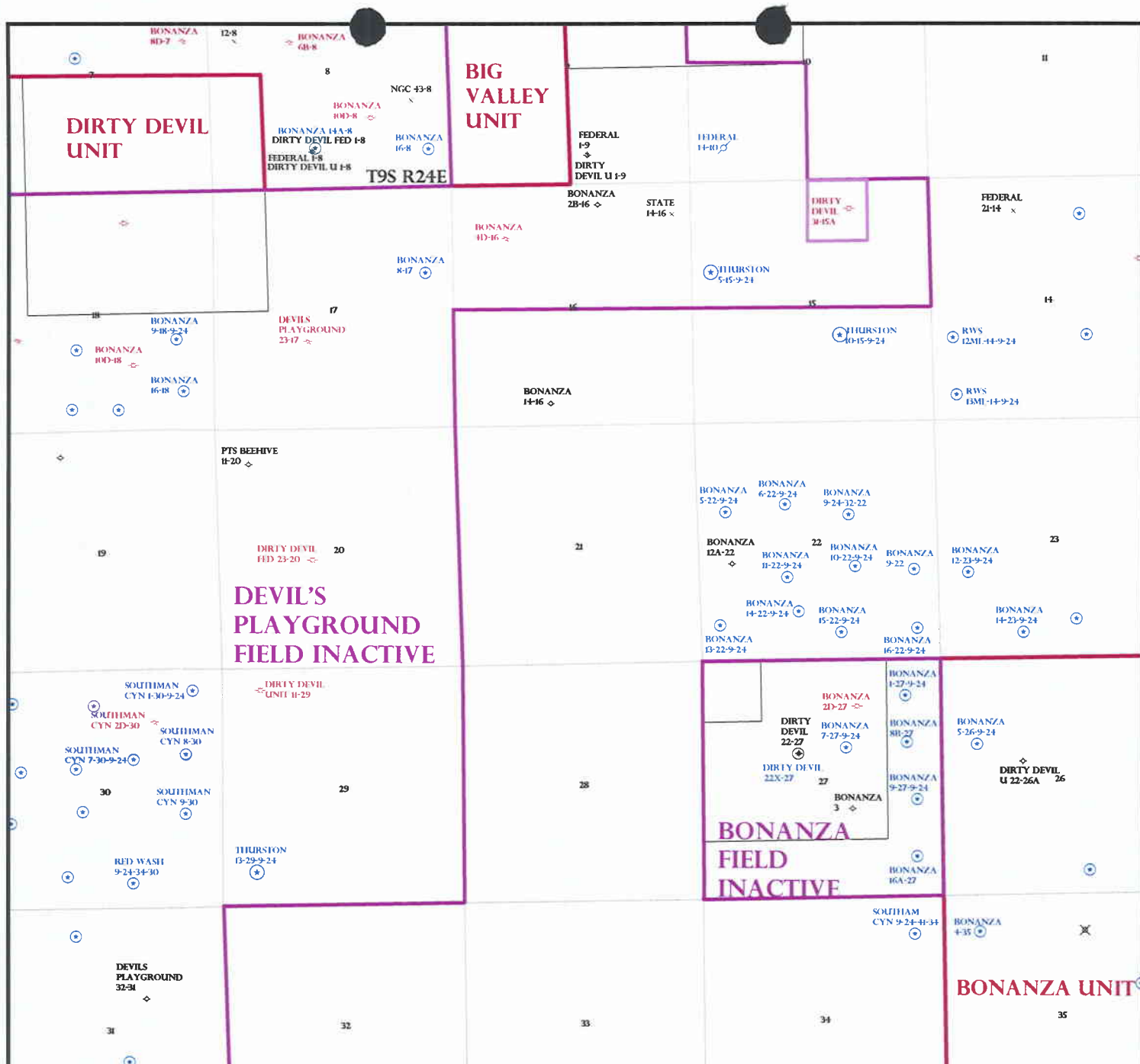
LOCATION AND SITING:

☐ R649-2-3.
Unit _____
☒ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
☐ R649-3-3. Exception
☐ Drilling Unit
Board Cause No: _____
Eff Date: _____
Siting: _____
☐ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS:

1. Federal Drilling
2. Spacing Strip
3. Surface CSG Cont Strip
4. Cont Strip #3 (4 1/2" production, 2500' MW)
5. STATEMENT OF BASIS



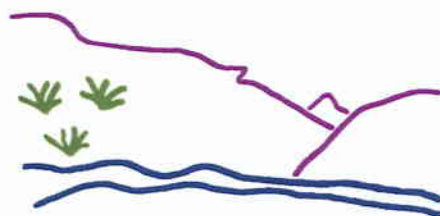
OPERATOR: THURSTON ENERGY N2790)

SEC: 15,29 T. 9S R. 24E

FIELD: WILDCAT (001)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY
DATE: 21-NOVEMBER-2005

**DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS**

OPERATOR: Thurston Energy Operating Company
WELL NAME & NUMBER: Thurston 5-15-9-24
API NUMBER: 43-047-37405
LOCATION: 1/4,1/4 SW/NW Sec:15 TWP:9S RNG:24E 1963 FSL 463 FEL

Geology/Ground Water:

Thurston has proposed setting 2,000 feet of surface casing cemented to surface. The depth of the moderately saline water is estimated at 3,800'. A search of Division of Water Rights records shows 2 water wells within a radius of 10,000' from the center of Section 15. The wells are more than a mile north and south of the proposed well. Depths range from 100-250 feet. The wells are listed as being used for domestic and stock watering purposes. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The Green River Formation is expected to be very near the ground surface. Freshwater aquifers can be found in the Green River Formation and should be protected. Production casing cement should be brought up above the base of the moderately saline ground water in order to protect fresher waters uphole.

Reviewer: Brad Hill **Date:** 01/23/06

Surface:

The surface rights at this location are owned by the Federal Government and administered by the BLM. The operator is responsible for obtaining all required permits and rights-of-way from the BLM prior to making any surface disturbance or commencing drilling.

Reviewer: Brad Hill **Date:** 01/23/06

Conditions of Approval/Application for Permit to Drill:

None.

 **State Online Services** **Agency List** **Business.utah.gov**

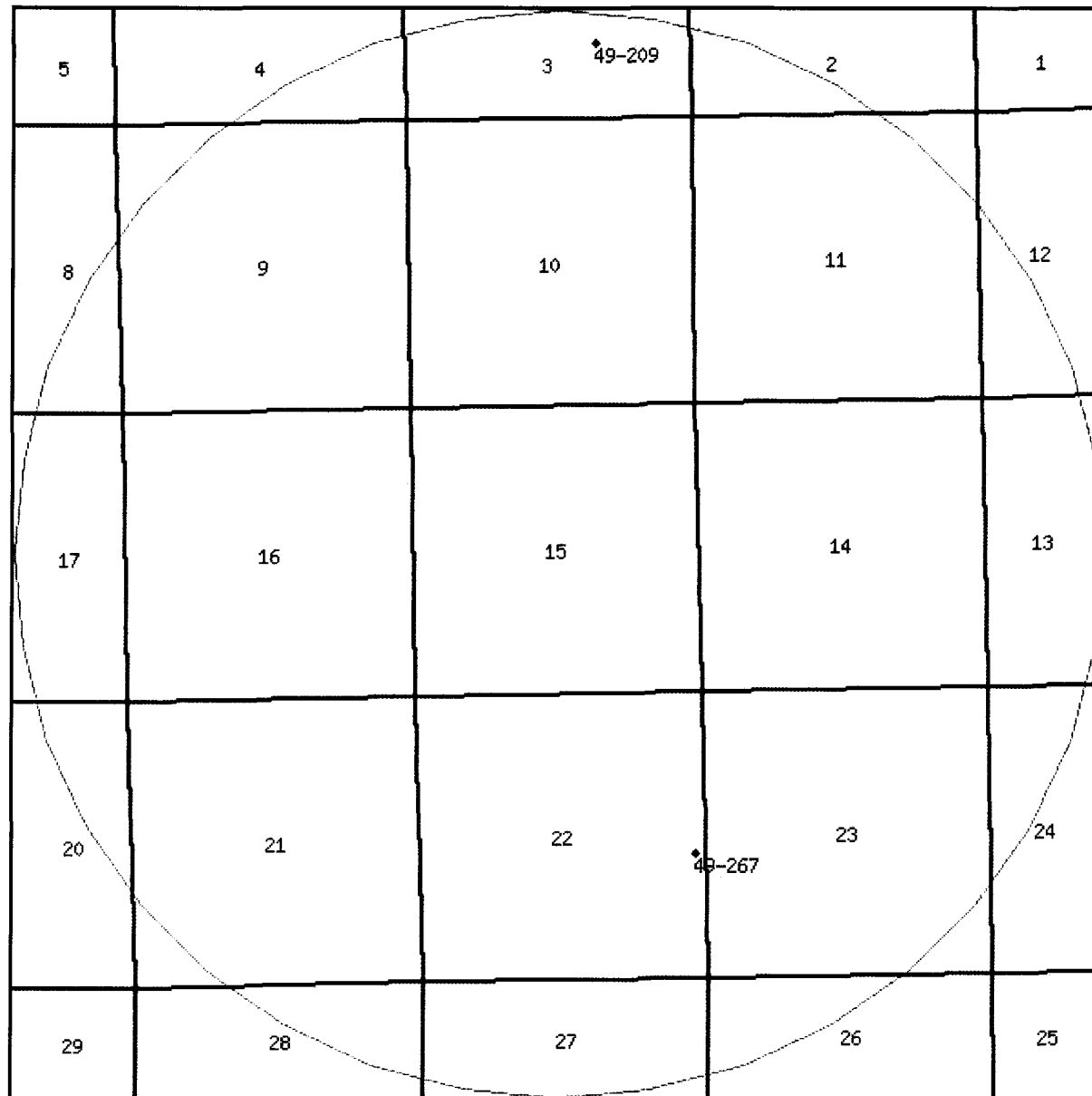
Search Utah.gov **GO**

UTAH DIVISION OF WATER RIGHTS

WRPLAT Program Output Listing

Version: 2004.12.30.00 Rundate: 01/23/2006 02:46 PM

Radius search of 10000 feet from a point N2640 E2640 from the SW corner, section 15, Township 9S, Range 24E, SL b&m
Criteria:wrtypes=W,C,E podtypes=U status=U,A,P usetypes=all



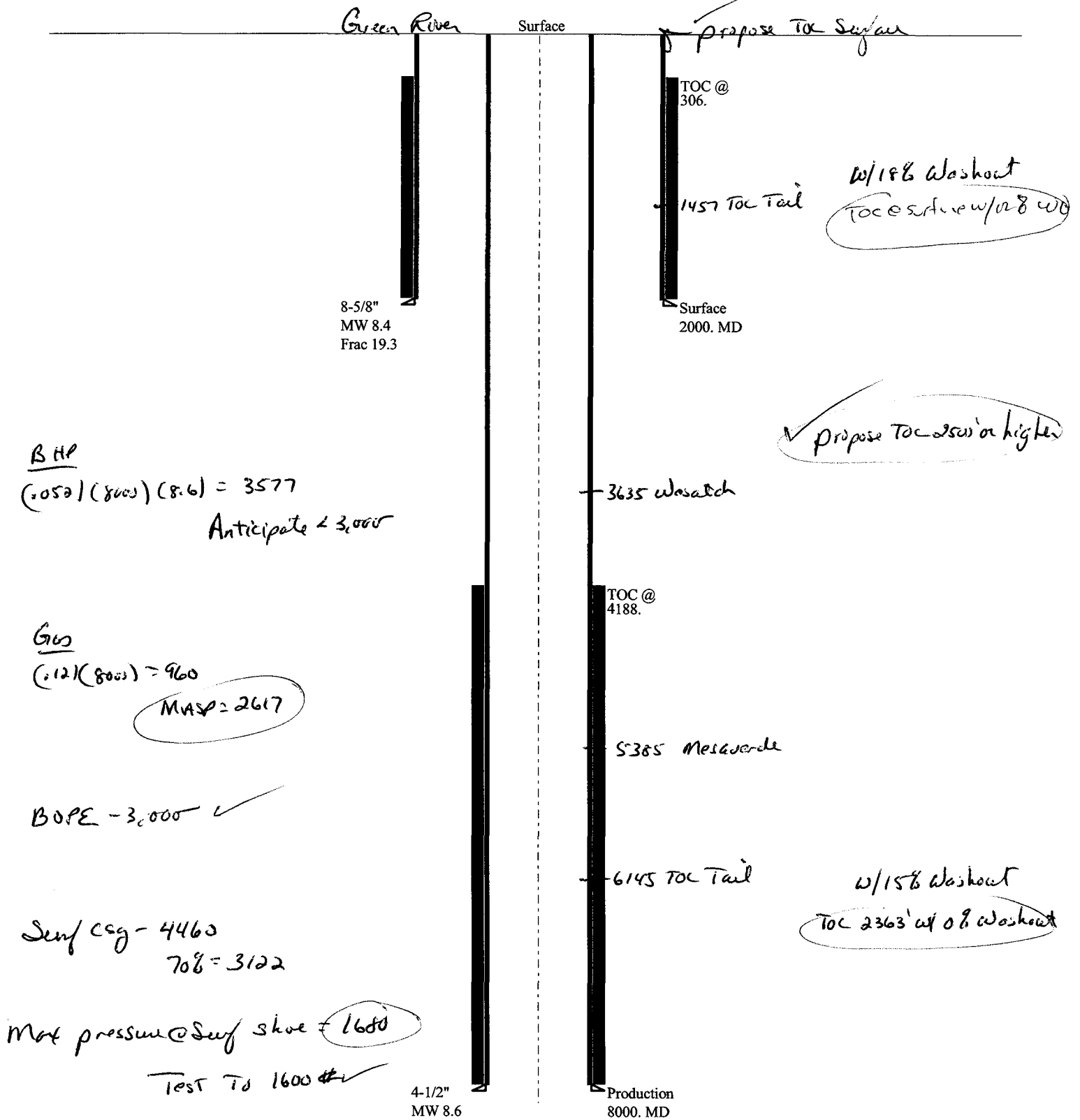
Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name
<u>49-209</u>	Underground N1350 W1800 SE 03 9S 24E SL	<u>well info</u>	P	1955	1101 D	0.011	0.000	PARTNERSHIP G.S. ZIEGLER & COMPANY JENSEN UT 84035
<u>49-267</u>	Underground N2282 W262 SE 22 9S 24E SL		P	1925	S	0.016	0.000	JOSEPH P. HACKING VERNAL UT 84078

[Natural Resources](#) | [Contact](#) | [Disclaimer](#) | [Privacy Policy](#) | [Accessibility Policy](#)

11-05 Thurston 5-15-9-24

Casing Schematic



Well name:	11-05 Thurston 5-15-9-24	
Operator:	Thurston Energy Operation	
String type:	Surface	Project ID: 43-047-37405
Location:	Uintah County, Utah	

Design parameters:
Collapse

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:
Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 93 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 299 ft

Cement top: 306 ft

Burst

Max anticipated surface pressure: 83 psi
Internal gradient: 0.436 psi/ft
Calculated BHP 956 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 1,749 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 8,000 ft
Next mud weight: 8.600 ppg
Next setting BHP: 3,574 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,000 ft
Injection pressure 2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	8.625	36.00	J-55	ST&C	2000	2000	7.7	143.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	3450	3.954	956	4460	4.67	72	434	6.03 J

Prepared by: Clinton Dworshak
Utah Div. of Oil & Mining

Phone: (801) 538-5281
FAX: (801)359-3940

Date: November 21, 2005
Salt Lake City, Utah

ENGINEERING STIPULATIONS -

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	11-05 Thurston 5-15-9-24	
Operator:	Thurston Energy Operation	
String type:	Production	Project ID: 43-047-37405
Location:	Uintah County, Utah	

Design parameters:
Collapse

Mud weight: 8.600 ppg
Design is based on evacuated pipe.

Minimum design factors:
Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 177 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 4,188 ft

Burst

Max anticipated surface pressure: 83 psi
Internal gradient: 0.436 psi/ft
Calculated BHP 3,574 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on air weight.
Neutral point: 6,971 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8000	4.5	11.60	N-80	LT&C	8000	8000	3.875	185.4

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3574	6350	1.777	3574	7780	2.18	93	223	2.40 J

Prepared by: Clinton Dworshak
Utah Div. of Oil & Mining

Phone: (801) 538-5281
FAX: (801)359-3940

Date: November 21, 2005
Salt Lake City, Utah

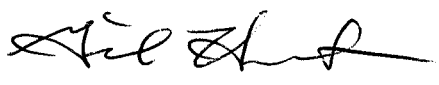
ENGINEERING STIPULATIONS -

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

STATE ACTIONS
Resource Development Coordinating Committee
Governor's Office of Planning and Budget
5110 State Office Building
SLC, UT 84114
Phone No. 537-9230

1. State Agency Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	2. Approximate date project will start: Upon Approval or December 5, 2005
3. Title of proposed action: Application for Permit to Drill	
4. Description of Project: Thurston Energy Operating Company proposes to drill the Thurston 5-15-9-24 well (wildcat) on a State lease ML-28042, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
5. Location and detailed map of land affected (site location map required, electronic GIS map preferred) (include UTM coordinates where possible) (indicate county) 1963' FNL 463' FWL, SW/4 NW/4, Section 15, Township 9 South, Range 24 East, Uintah County, Utah	
6. Possible significant impacts likely to occur: Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
7. Identify local government affected a. Has the government been contacted? No. b. When? c. What was the response? d. If no response, how is the local government(s) likely to be impacted?	
8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable: a. Has the representative and senator been contacted? N/A	
9. Areawide clearinghouse(s) receiving state action: (to be sent out by agency in block 1) Uintah Basin Association of Governments	
10. For further information, contact: Diana Whitney Phone: (801) 538-5312	11. Signature and title of authorized officer  Gil Hunt, Associate Director Date: November 21, 2005

From: Robert Clark
To: Whitney, Diana
Date: 11/28/2005 9:17:07 AM
Subject: RDCC short turn around responses

The following comments are being submitted directly to DOG&M due to their short turn around status.

The following comments are submitted for **RDCC #5944-5949**. The comments pertain to all projects.

Comments begin: The proposed *North Horseshoe 12-7-6-22, 16-9-6-22, 14-10-6-22, 2-15-6-22, 4-15-6-22, and 3-16-6-21* well drilling projects in Uintah County may require a permit, known as an Approval Order, from the Utah Division of Air Quality if any compressor stations are constructed at the site. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, SLC, UT, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The proposed project is also subject to Utah Air Quality Rule R307-205-3, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Division of Air Quality, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm. **Comments end.**

The following comments are submitted for **RDCC #5950-5952**. The comments pertain to all projects.

Comments begin: The proposed *Thurston 5-15-9-24, 13-29-9-24, and 10-15-9-24* well drilling projects in Uintah County may require a permit, known as an Approval Order, from the Utah Division of Air Quality if any compressor stations are constructed at the site. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, SLC, UT, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The proposed project is also subject to Utah Air Quality Rule R307-205-3, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Division of Air Quality, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm. **Comments end.**

Robert Clark

Division of Air Quality
536-4435

CC: McNeill, Dave; Wright, Carolyn

Project Number: 5950 Sponsor: Division of Oil, Gas and Mining
SLB&M: Sec. 15, T9S, R24e Counties Affected: Uintah
Description: Application for Permit to Drill - proposal to drill a wildcat well the Thurston
5-15-9-24, on a State lease ML-28042

Comments:

Wellpad placement disturbs soils. Vegetative and/or structural measures to control erosion shall be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS.

Further, if vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices shall be implemented within 60 days to control erosion. Such measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate.

In addition, no negative disturbance or degradation to or of surrounding or nearby soils, vegetation, or riparian areas shall be permitted.

In addition, no spills of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials shall be permitted.



State of Utah

**Department of
Natural Resources**

MICHAEL R. STYLER
Executive Director

**Division of
Oil, Gas & Mining**

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

January 23, 2006

Thurston Energy Operating Company
P O Box 240
Vernal, UT 84078

Re: Thurston 5-15-9-24 Well, 1963' FNL, 463' FWL, SW NW, Sec. 15, T. 9 South,
R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37405.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
SITLA
Bureau of Land Management, Vernal District Office

Operator: Thurston Energy Operating Company
Well Name & Number Thurston 5-15-9-24
API Number: 43-047-37405
Lease: ML-28042

Location: SW NW **Sec.** 15 **T.** 9 South **R.** 24 East

Conditions of Approval

1. **General**

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. **Reporting Requirements**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
8. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.
9. Surface casing shall be cemented to the surface.
10. Cement volume for the 4 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2500' MD as indicated in the submitted drilling plan.



State of Utah

**Department of
Natural Resources**

MICHAEL R. STYLER
Executive Director

**Division of
Oil, Gas & Mining**

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

February 26, 2007

Ginger Stringham
Thurston Energy Operating Company
P.O. Box 240
Vernal, UT 84078

Re: APD Rescinded –Thurston 5-15-9-24 Sec. 15 T. 9 R. 24E
Uintah County, Utah API No. 43-047-37405


Ms. Stringham:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on January 23, 2006. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective February 26, 2007.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
SITLA, Ed Bonner
Bureau of Land Management, Vernal

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>		5. MINERAL LEASE NO: ML-28042	6. SURFACE: Federal
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
2. NAME OF OPERATOR: Thurston Energy Operating Company		8. UNIT or CA AGREEMENT NAME:	
3. ADDRESS OF OPERATOR: PO BOX 240 CITY Vernal STATE UT ZIP 84078		PHONE NUMBER: 789-0968	9. WELL NAME and NUMBER: Thurston 5-15-9-24
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1963' FNL & 463' FWL 652946X 40.037738 AT PROPOSED PRODUCING ZONE: Same as above. 44332754 -109.207329		10. FIELD AND POOL, OR WILDCAT: Wildcat Denis Playground 575	
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 15 9S 24E		12. COUNTY: Uintah	
13. STATE: UTAH		14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 38.1 miles south of Vernal, UT	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 463'	16. NUMBER OF ACRES IN LEASE: 616.59	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 3,100	19. PROPOSED DEPTH: 8,000	20. BOND DESCRIPTION: 0269434510	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5,313 GR	22. APPROXIMATE DATE WORK WILL START: 5/1/2007	23. ESTIMATED DURATION: 30 Days	

24. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4	9 5/8 J-55 36#	2,000	Premium "5" 197 sks 3.82 11.0 PPG
			Class "G" 159 sks 1.18 15.6 PPG
			Class "G" 10-200 sks 1.15 15.8 PPG
7 7/8	5 1/2 N-80 17#	8,000	Premium Lite II 132 sks 3.38 11.0 PPG
			Class "G" 702 sks 1.31 sks 14.3 PPG

25. ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- | | |
|--|--|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER | <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER |

NAME (PLEASE PRINT) Ginger Stringham

TITLE Agent

SIGNATURE

DATE 4/24/2007

(This space for State use only)

API NUMBER ASSIGNED: 43-047-37405.

Federal Approval of this
Action is Necessary

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 05-16-07
BY: [Signature]

(See Instructions on Reverse Side)

RECEIVED
APR 25 2007

DIV. OF OIL, GAS & MINING

T9S, R24E, S.L.B.&M.

THURSTON ENERGY OPERATING COMPANY

Found 1977 Brass
Cap 0.4' above
ground. Pile of
Stones

S89°59'W - 39.95 (G.L.O.)

N89°59'34"W - 2637.13' (Meas.)

S89°35'W - 39.67 (G.L.O.)

Found 1977 Brass
Cap 1' above ground.
Steel post 5 NELY.

N0°07'W - 80.28 (G.L.O.)
N00°06'38"W - (Basis of Bearings) 5298.60' (Measured)

1963'

46.3'

Proposed
Well

**WELL LOCATION:
THURSTON 5-15-9-24**

ELEV. UNGRADED GROUND = 5316.4'

15

1/4 Corner not
monumented

Lot 1

Found 1977 Brass
Cap 1' above
ground. Pile of
Stones

M.S. 5221

Lot 3

Lot 4

Found 1977 Brass
Cap 0.2' above
ground. Pile of
Stones

Lot 2

M.S. 5221

M.S. 5220

N89°48'54"W - 2624.67' (Meas.)

N89°51'W - 39.76 (G.L.O.)

Found 1977
Brass Cap.
Pile of
Stones

S89°51'26"W - 2622.78' (Meas.)

S89°51'W - 39.73 (G.L.O.)

Found 1977
Brass Cap. Pile
of Stones

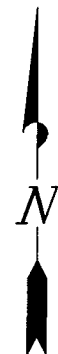
N0°04'W - 40.28 (G.L.O.)

N0°00'06"W - 2621.41' (Meas.)
N0°01'W - 39.72 (G.L.O.)

WELL LOCATION, THURSTON 5-15-9-24,
LOCATED AS SHOWN IN THE SW 1/4 NW
1/4 OF SECTION 15, T9S, R24E, S.L.B.&M.
UINTAH COUNTY, UTAH.

NOTES:

1. Well footages are measured at right angles to the Section Lines.
2. Bearings are based on Global Positioning Satellite observations.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS
MADE BY ME OR UNDER MY SUPERVISION AND THAT
THE SAME ARE TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION No. 362051
STATE OF UTAH

TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078
(435) 789-1365

DATE SURVEYED: 10-15-05	SURVEYED BY: K.R.K.	SHEET 2 OF 10
DATE DRAWN: 10-29-05	DRAWN BY: J.R.S.	
SCALE: 1" = 1000'	Date Last Revised:	

▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS BENCH MARK 46 EAM LOCATED IN
THE SW 1/4 OF SECTION 23, T9S, R24E, S.L.B.&M. THE
ELEVATION OF THIS BENCH MARK IS SHOWN ON THE
BONANZA 7.5 MIN. QUADRANGLE AS BEING 5550'.

**THURSTON 5-15-9-24
(Proposed Well Head)**

NAD 83 Autonomous
LATITUDE = 40° 02' 16.0"
LONGITUDE = 109° 12' 28.7"

Ten Point Plan

Thurston Energy Operating Company

Thurston 5-15-9-24

Surface Location SW $\frac{1}{4}$ NW $\frac{1}{4}$

Section 15, T.9S. R.24E.

1. Surface Formation

Green River

2. Estimated Formation Tops and Datum:

<u>Formation</u>		<u>Depth</u>	<u>Datum</u>
Green River		Surface	+5,313' G.L.
Birds Nest	Water	1,600	+3,713'
Wasatch	Oil/Gas	3,953	+1,360'
Mesaverde	Oil/Gas	5,429	-116'
TD		8,000	-2,687'

A 12 ¼" hole will be drilled to 2,000' +/- . The hole depth will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest. All water and oil and gas bearing zones shall be protected by casing and cement program.

3. Producing Formation Depth:

Formation objectives include the Wasatch, Mesaverde and there sub-members.

4. Proposed Casing:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight/FT</u>	<u>Grade</u>	<u>Coupling & Tread</u>	<u>Casing Depth</u>	<u>New/Used</u>
12 ¼"	9 5/8"	36#	J-55	STC	2000	NEW
7 7/8"	5 ½"	17#	N-80	LTC	T.D.	NEW

Cement Program:

The Surface Casing will be cemented to the Surface as follows:

Note: Cement amounts shown with 50% excess.

<u>Casing Depth</u>	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Water Mix</u>	<u>Cement Weight</u>
Lead:						
0-1,600'	9 5/8	Premium "5" 16% Gel 10 #/sk Gilsonite 3% Salt 3 #/sk GB3 0.25 #/sk Flocele	197 sks. +/-	3.82ft³/sk	23	11.0 ppg
Tail:						
1,600-2,000'	9 5/8	Class "G" 2% Calcium Chloride 0.25 #/sk Flocele	159 sks. +/-	1.18ft³/sk	5	15.6 ppg
Top Job:						
	9 5/8	Class "G" 4% Calcium Chloride 0.25 #/sk Flocele	10-200 sks. +/-	1.15ft³/sk	5	15.8 ppg

Production casing will be cemented to 1,800' or higher as follows.

Note: Tail should be 200' above the Wasatch.

Note: Cement amounts shown with 25% excess.

<u>Casing Depth</u>	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Water Mix</u>	<u>Cement Weight</u>
Lead: 1,800'-3,753'	5 1/2	Premium Lite II 0.05 #/sk Static Free 0.25 #/sk Cello Flake 5 #/sk KOL Seal 0.005 gps FP-6L 8% Gel 0.5% R-3 0.5% FL-52	132 sks +/-	3.38ft ³ /sk	20.52	11.0 ppg
Tail: 3,753'-8,000'	5 1/2	Class "G" 0.05% Static Free 10% NACL 0.1% R-3 2% Gel	702 sks +/-	1.31ft ³ /sk	5.91	14.3 ppg

5. BOP and Pressure Containment Data:

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 9 5/8" surface casing. An upper kelly cock to the required pressure rating with a handle available shall be employed.

The BOP system including the casing will be pressure tested to minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./OT.</u>	<u>Fluid Loss Ml/30 Mins.</u>	<u>Mud Type</u>
0-2000 2000-T.D.	Air/Clear Water 8.4-9.4	----- 30-45	No Control 8-10	Water/Gel LSND water based mud system

Note: Mud weights may exceed 9.4 due to solids increasing at or near T.D. Increased weights are not required to control formation pressure. Operator will have on location sufficient mud and weight material to increase mud weight to 9.4 at any time while drilling the subject well. Visual mud monitoring incorporating pit level indicators shall be used.

7. Testing, Coring, Sampling and Logging:

- a) DST: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Mud Sampling: Every 10' from 2000' to T.D.
- d) Logging:

Type	Interval
DLL/SFL W/GR and SP	T.D. to Surf. Csg
FDC/CNL W/GR and CAL	T.D. to Surf. Csg

8. Abnormalities (including sour gas):

Based on off set wells anticipated bottom hole pressure will be less than 3000 psi. No abnormal pressures, temperatures or other hazards are anticipated. Other wells drilled in the area have not encountered over pressured zones or H2S.

9. Other facets of the proposed operation:

Off Set Well information:

Producing Wells:

Bonanza 4D-16

Abandon Wells:

Bonanza 14-16

Dirty Devil U 1-9

Bonanza 2B-16

State 14-16

Shut in Wells:

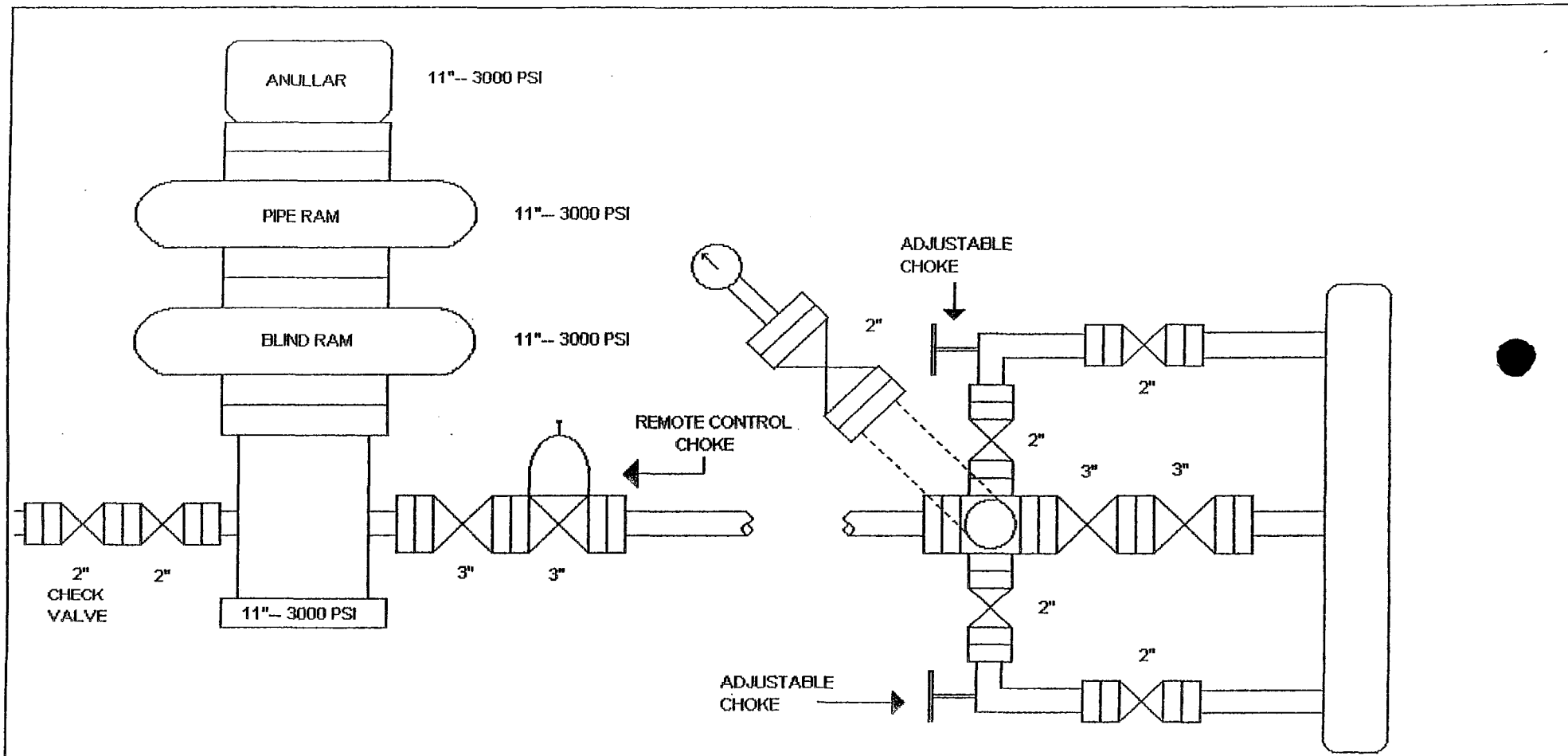
Dirty Devil 31-15 A

Water Wells:

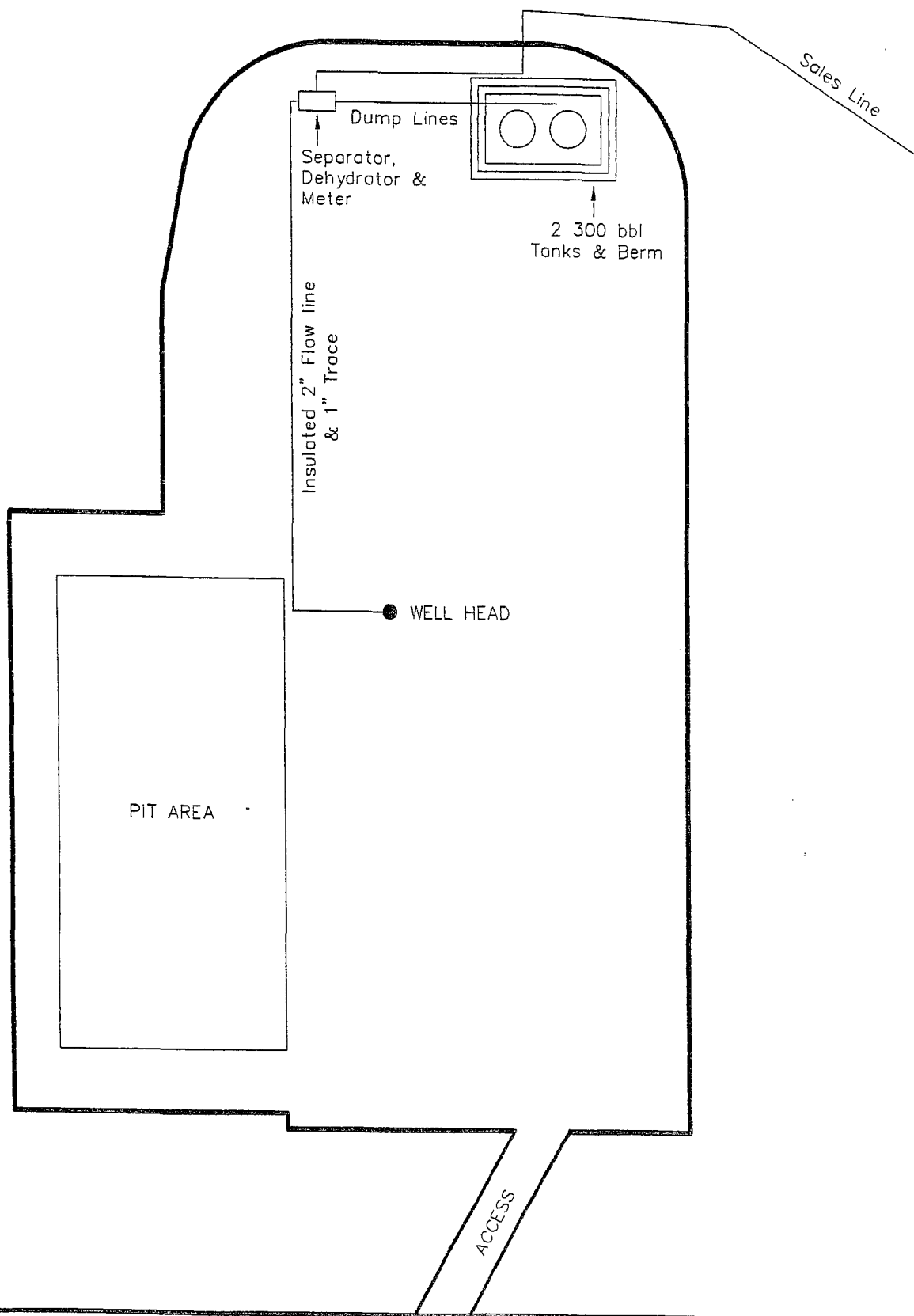
Federal 14-10

10. Drilling schedule:

The anticipated starting date is 5/1/57. Duration of operations is expected to be 30 days.



TYPICAL PRODUCTION LAYOUT



THURSTON ENERGY OPERATING COMPANY

13 POINT SURFACE USE PLAN

FOR WELL

THURSTON 5-15-9-24

LOCATED IN SW $\frac{1}{4}$ NW $\frac{1}{4}$

SECTION 15, T.9S, R24E, S.L.B.&M.

UINTAH COUNTY, UTAH

LEASE NUMBER: ML-28042

SURFACE OWNERSHIP: FEDERAL

1. Existing Roads:

Thurston Energy Operating CO

Thurston #5-15-9-24

Section 15, T9S, R24E

Starting in Vernal, Utah:

Proceed in an easterly, then southerly direction from Vernal, Utah along US Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 33.4 miles to the junction of the Little Bonanza Road, County B Road 3430; exit right and proceed in a southwesterly direction along the Little Bonanza road approximately 1.3 miles to the proposed access road; follow road flags in a northwesterly direction approximately 460 feet to the proposed location.

Total distance from Vernal, Utah to the proposed well location is approximately 38.1 miles.

All existing roads to the proposed location are State of Utah, BLM maintained or County Class D roads. Please see the attached map for additional details.

2. Planned access road

The proposed access road will be approximately 2,415' +/- of new construction on lease. The road

will be graded once per year minimum and maintained.

- | | |
|----------------------------------|-------------|
| A) Approximate length | 460 ft |
| B) Right-of-Way width | 30 ft |
| C) Running surface | 18 ft |
| D) Surface material | Native soil |
| E) Maximum grade | 5% |
| F) Fence crossing | None |
| G) Culvert | None |
| H) Turnouts | None |
| I) Major cuts and fills | None |
| J) Road Flagged | Yes |
| K) Access road surface ownership | Federal |
| L) All new construction on lease | Yes |
| M) Pipe line crossing | No |

Please see the attached location plat for additional details.

An off lease Right-of-Way will not be required.

All surface disturbances for the road and location will be within the lease boundary.

3. Location of existing wells

The following wells are located within a one-mile radius of the location site.

- | | |
|-------------------------|------|
| A) Producing well | |
| Bonanza 4D-16 | |
| B) Water well | None |
| C) Abandoned well | |
| State 14-16 | |
| Dirty Devil U 1-9 | |
| Bonanza 2B-16 | |
| Bonanza 14-16 | |
| D) Temp. abandoned well | None |
| E) Disposal well | |
| Federal 14-10 | |

- F) **Drilling /Permitted well**
Thurston 10-15-9-24
- G) **Shut in wells**
Dirty Devil 31-15A
- H) **Injection well** **None**
- I) **Monitoring or observation well** **None**

Please see the attached map for additional details.

4. Location of tank batteries, production facilities and production gathering service lines.

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Carlsbad Canyon** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded. The required paint color is **Carlsbad Canyon**.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulation identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, commingling on lease or off lease, of production, will have

prior written approval from the authorized officer.

If the well is capable of economic production a surface gas line will be required.

Approximately 2,740' +/- of 3" surface pipeline would be constructed on Federal Lands. The pipeline will tie into the existing pipeline in Sec 15, T9S, R24E. The pipeline will be strung and boomed to the east of the location and parallel to the access roads.

An off lease Right-of-Way will not be required.

Please see the attached location diagrams for pipeline location. There will be no additional surface disturbances required for the installation of a gathering line.

The gas meter run will be located within 500' of the wellhead. The gas line will be buried or anchored down from the wellhead to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office and State of Utah,

Division of Oil, Gas, and Mining.
All measurement facilities will conform to API (American Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. Location and type of water supply

Water for drilling and cementing will come from a municipal source at 355 S. 1000 E Vernal, UT. (Dalbo/A-1 Tank)

6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. Additional road gravel or pit lining material will be obtained from private resources.

7. Methods for handling waste disposal

A) Pit construction and liners:

The reserve pit will be approximately **12 ft.** deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined.

The reserve pit will be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac

tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. During the 90-day period an application for approval for permanent disposal method and location will be submitted to the authorized officer.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized landfill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste.

E) Site clean-up:

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout

Location dimensions are as follows:

A) Pad length	345 ft
B) Pad width	260 ft
C) Pit depth	12 ft
D) Pit length	150 ft
E) Pit width	75 ft
F) Max cut	14.7 ft
G) Max fill	6.6 ft
H) Total cut yds.	6,860 cu yds
I) Pit location	South end
J) Top soil location	West end
K) Access road location	East end
L) Flare Pit	corner C

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.

E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately **1,500** cubic yards of material. Topsoil will be stockpiled in one distinct pile. Placement of the topsoil is noted on the attached location plat. The topsoil pile from the location will be seeded as soon as the soil is stock piled with the seed mix listed. When all drilling and completion activities have been completed and the pit back-filled the topsoil from the pit area will be spread on the pit area. The pit area will be seeded when the soil has been spread. The unused portion of the location (the area outside the dead men) will be re-contoured.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow or as near as possible when the pit is back-filled

All disturbed areas will be re-contoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert the run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified and left with a rough surface.

A) Seeding dates:

Seed will be spread when topsoil is stock piled and when reclamation work is performed.

The seed mix and quantity list will be used whether the seed is broadcast or drilled.

B) Seed Mix:
**To be determined by the
Authorized Officer.**

11. Surface ownership:

Access road	Federal
Location	Federal
Pipe line	Federal

12. Other information:

A) Vegetation

The vegetation coverage is Slight. The majority of the existing vegetation consists of Sagebrush. Rabbit brush, Bitter Brush, and Indian Rice grass are also found on the location.

B) Dwellings:

There are no dwellings or other facilities within a one-mile radius of the location.

C) Archeology:

The location has been surveyed. A copy of that survey will be forwarded to your office.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

D) Water:

The nearest water is the White River located approximately 5 miles to the South.

E) Chemicals:

No pesticides, herbicides or other possible hazardous chemicals will be used without prior application.

F) Notification:

- a) Location Construction
At least forty eight (48) hours prior to construction of location and access roads.
- b) Location completion
Prior to moving on the drilling rig.
- c) Spud notice
At least twenty-four (24) hours prior to spudding the well.
- d) Casing string and cementing
At least twenty-four (24) hours prior to running casing and cementing all casing strings.
- e) BOP and related equipment tests
At least twenty-four (24) hours prior to initial pressure tests.
- f) First production notice
Within five (5) business days after the new well begins, or production resumes after well has been off production for more than 90 days.

G) Flare pit:

The flare pit will be located in **corner C** of the reserve pit outside the pit fences and 100 feet from the bore hole on the east side of the location. All fluids will be removed from the pit within 48 hours of occurrence.

13. Lessees or Operator's representative and certification

A) Representative

Ginger Stringham
Paradigm Consulting
Vernal, UT 84078

Office 435-789-4162
Fax 435-789-8188
Cellular 435-790-4163

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, onshore oil and gas orders, and any applicable notices to lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be performed by Thurston Energy Operating Company and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Self Certification Statement

The following self-certification statement is provided per Federal requirements dated June 15, 1988.

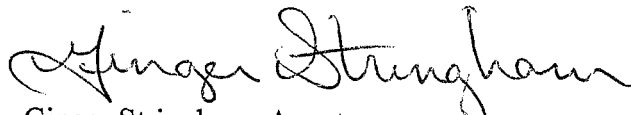
Please be advised that Thurston Energy Operating Company is considered to be the operator of the following well:

Thurston 5-15-9-24
Section 15, T. 9S, R. 24E
SW ¼ of the NW ¼
Lease ML-28042
Uintah County, Utah

Thurston Energy Operating Company is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond UTB-000181 provides state-wide bond coverage on all Federal Lands.

Date 4/24/07


Ginger Stringham, Agent
Paradigm Consulting

Onsite Dates: 01/05/06

Statement of use of Hazardous Materials

No chemical(s) from the EPA's consolidated list of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization, Act (SARA) of 1986 will be used, produced, transported, stored, disposed, or associated with the proposed action. No extremely hazardous substances, as defined in 40 CFR 355, will be used, produced, stored, transported, disposed, or associated with the proposed action.

If you require additional information please contact:

Paradigm Consulting, INC
Ginger Stringham, Agent for
Thurston Energy Operating Company
PO BOX 790203
Vernal, UT 84079

435-789-4162 Office
435-789-8188 Fax

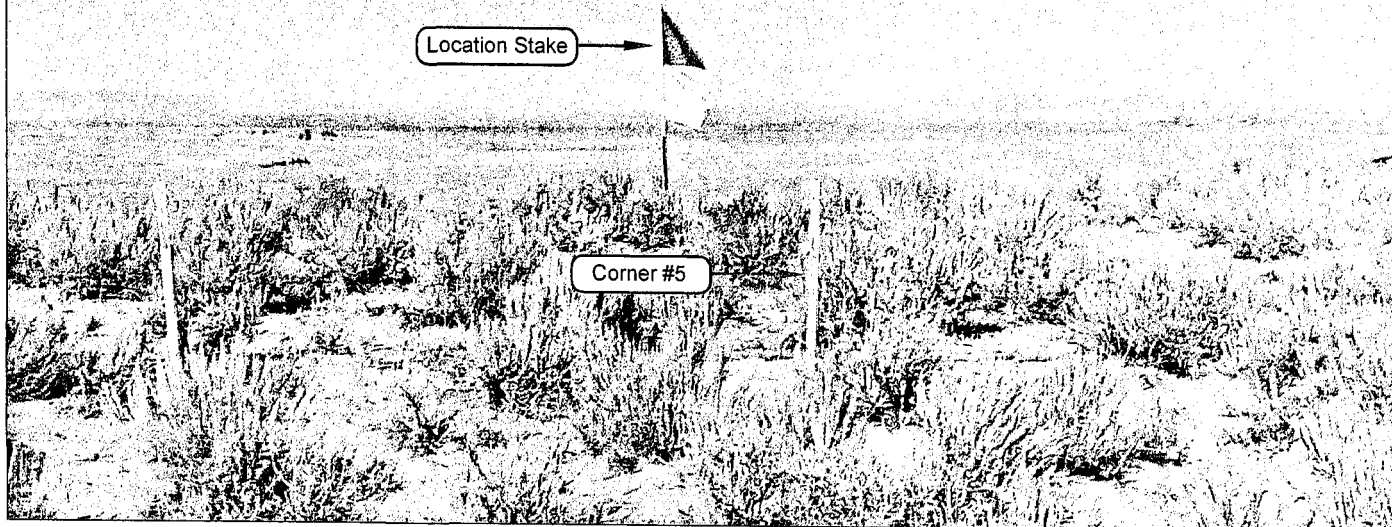


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

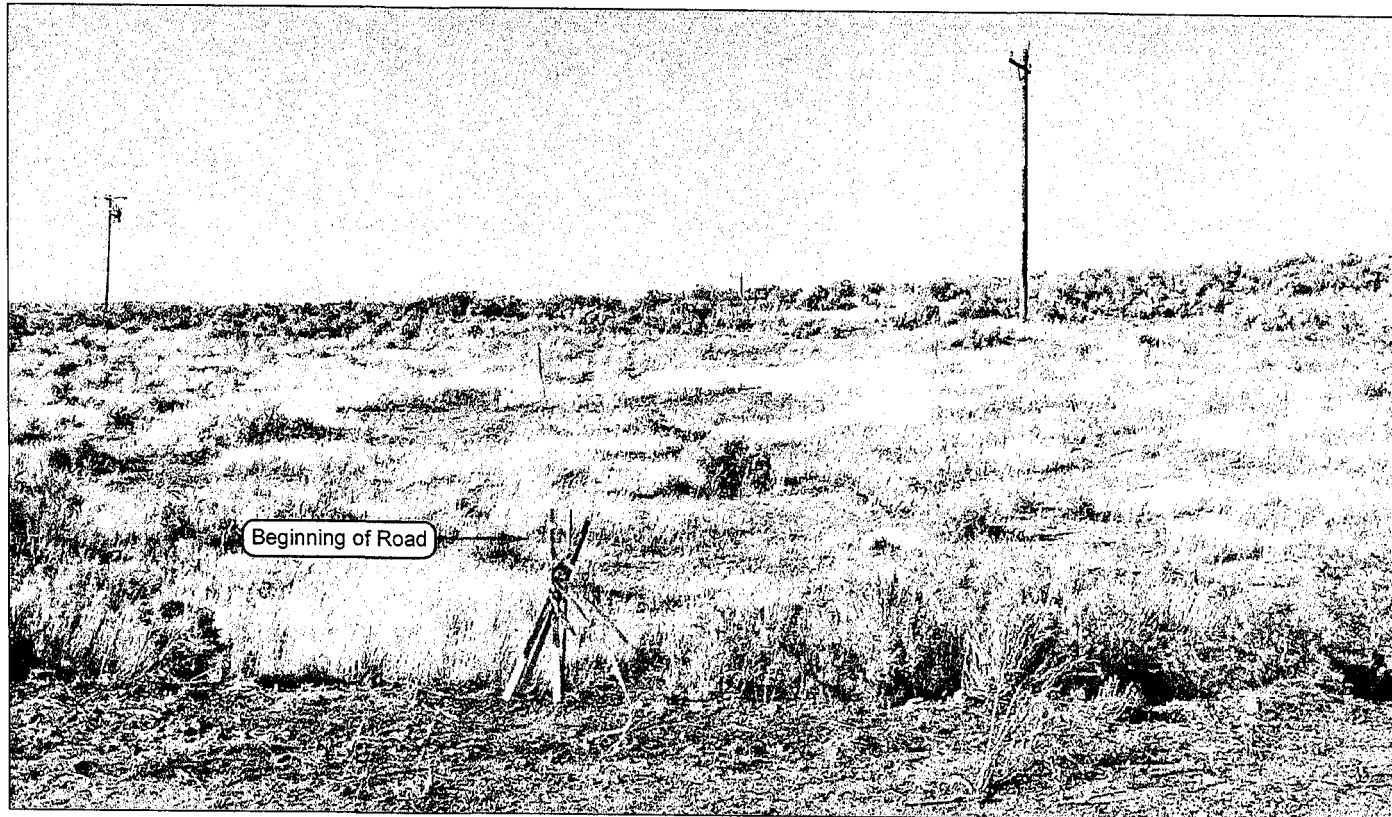


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15 , T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

LOCATION PHOTOS

TAKEN BY: K.R.K.

DRAWN BY: B.J.Z.

DATE TAKEN: 10-15-05

DATE DRAWN: 11-01-05

REVISED: 11-02-05 B.J.Z.

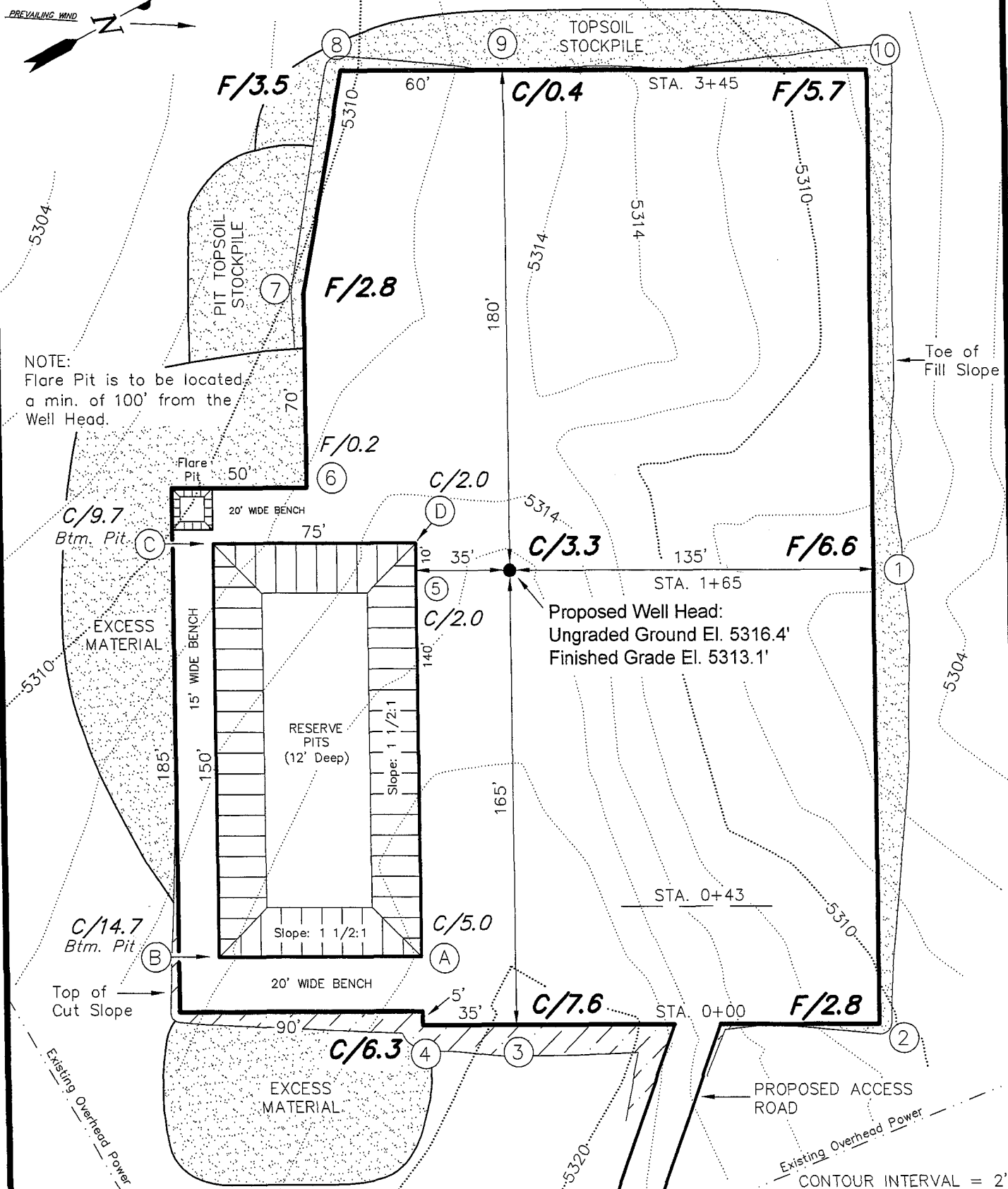
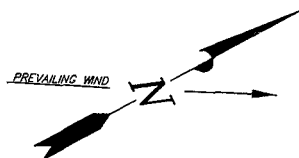
Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
1
OF 10

CUT SHEET
THURSTON 5-15-9-24

CUT SHEET

THURSTON 5-15-9-24



CONTOUR INTERVAL = 2'

Section 15, T9S, R24E, S.L.B.&M.

Qtr/Qtr Location: SW NW

Footage Location: 1963' FNL & 463' FWL

Date Surveyed:
10-15-05

Date Drawn:
11-1-05

Date Last Revision:

Timberline (435) 789-1365
Land Surveying, Inc.

SHEET
3
OF 10

Surveyed By: K.R.K.

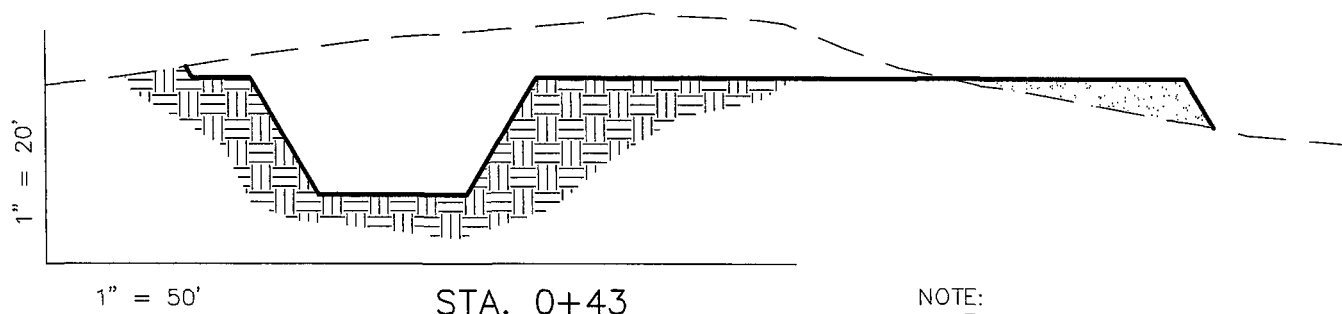
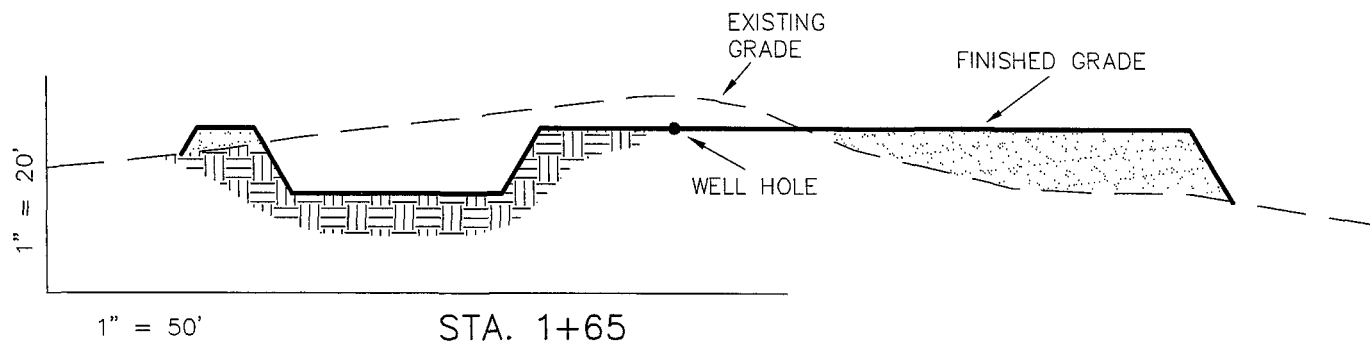
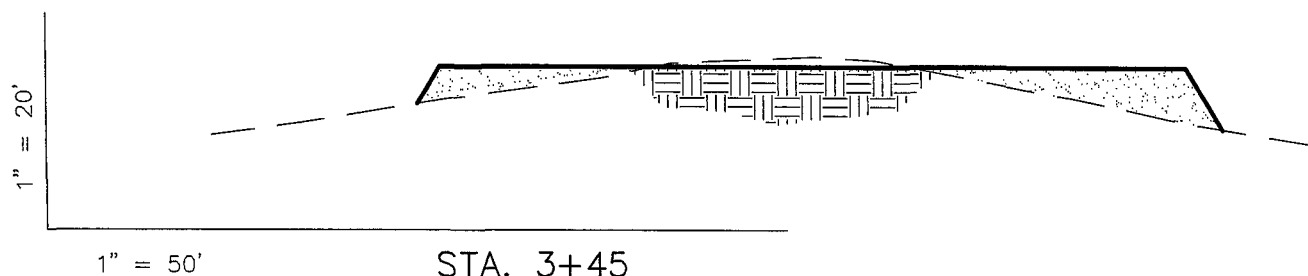
Drawn By: J.R.S.

Scale: 1" = 50'

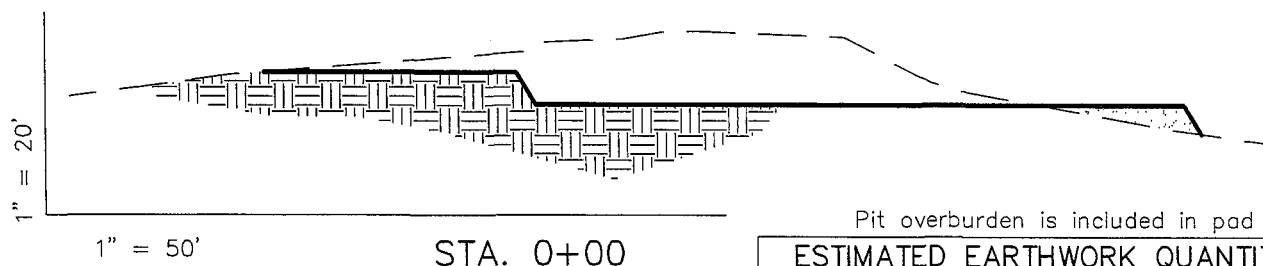
38 WEST 100 NORTH VERNAL, UTAH 84078

THURSTON ENERGY OPERATING COMPANY

CROSS SECTIONS THURSTON 5-15-9-24



NOTE:
UNLESS OTHERWISE NOTED
ALL CUT/FILL SLOPES ARE
AT 1.5:1



REFERENCE POINTS

185' NORTHEASTERLY = 5303.3'
235' NORTHEASTERLY = 5298.6'
230' NORTHWESTERLY = 5313.9'
280' NORTHWESTERLY = 5313.0'

Pit overburden is included in pad cut.
ESTIMATED EARTHWORK QUANTITIES
(No shrink or swell adjustments have been used)
(Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	3,520	5,190	Topsoil is not included in Pad Cut	-1,670
PIT	3,340	0		3,340
TOTALS	6,860	5,190	1,500	1,670

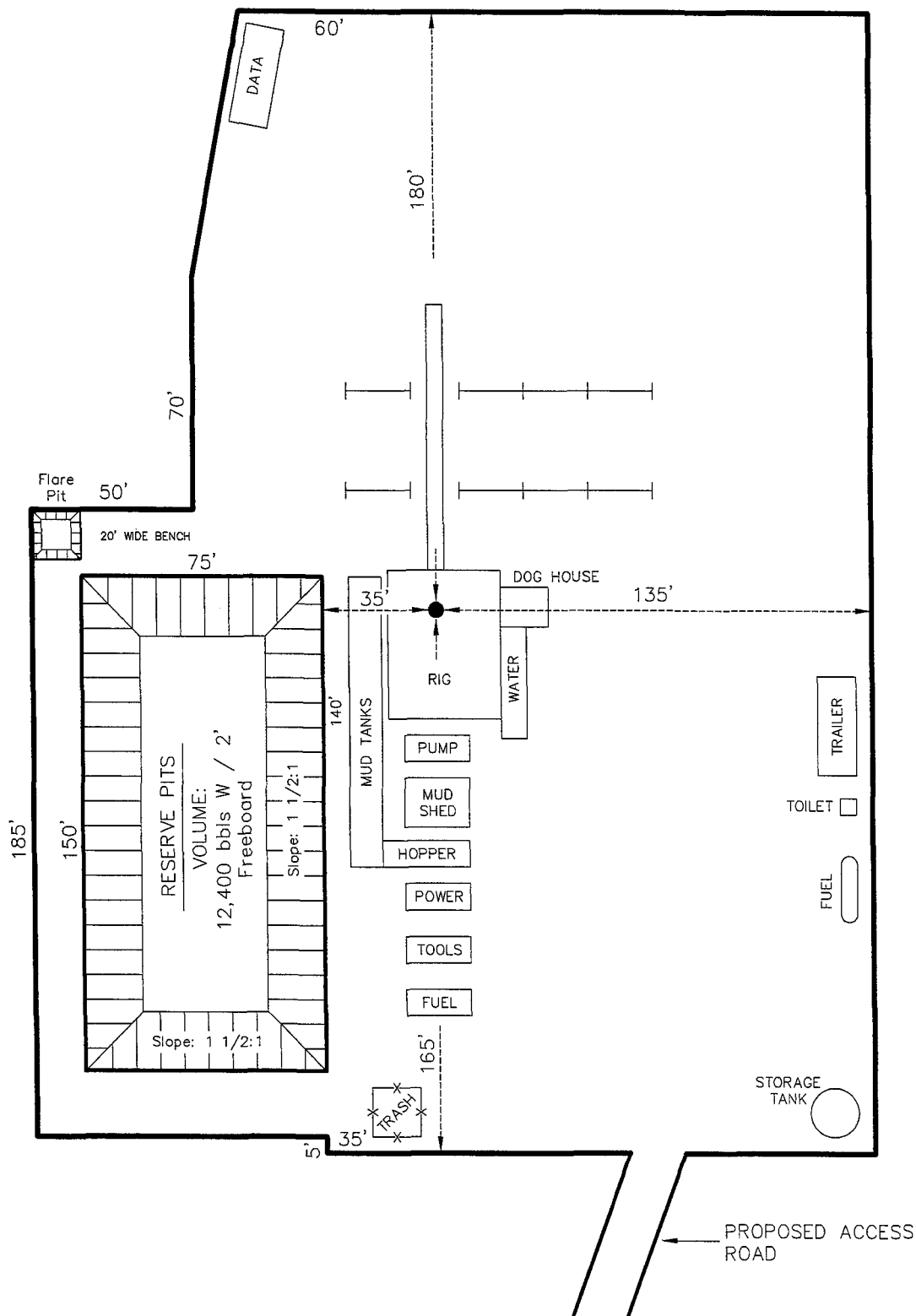
Excess Material after Pit Rehabilitation = 0 Cu. Yds.

Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW	Footage Location: 1963' FNL & 463' FWL
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	Timberline (435) 789-1365 Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	

SHEET
4
OF 10

THURSTON ENERGY OPERATING COMPANY

TYPICAL RIG LAYOUT THURSTON 5-15-9-24

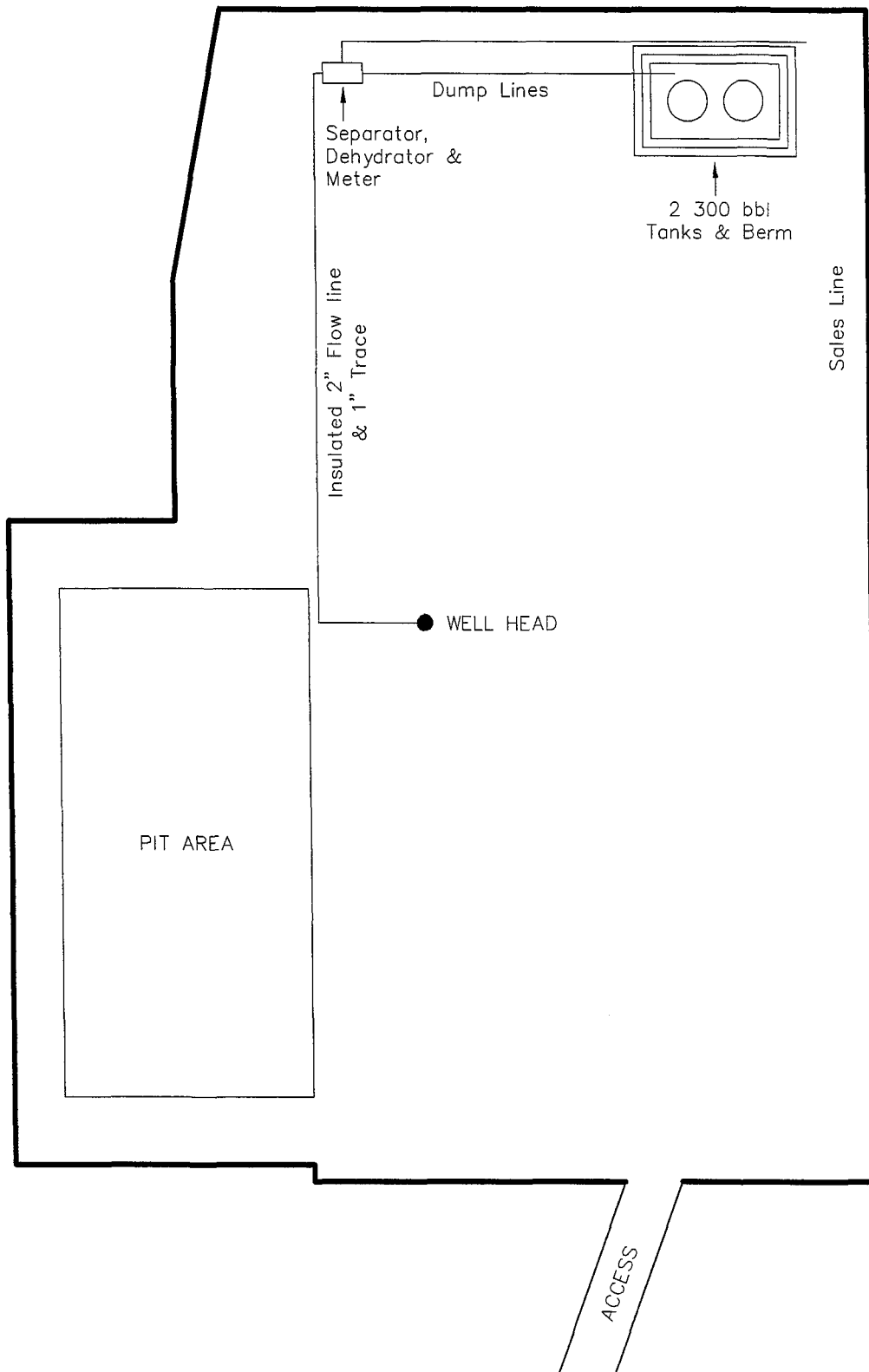


Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW	Footage Location: 1963' FNL & 463' FWL
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	Timberline (435) 789-1365
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	<i>Land Surveying, Inc.</i>
38 WEST 100 NORTH VERNAL, UTAH 84078			SHEET 5 OF 10

THURSTON ENERGY OPERATING COMPANY

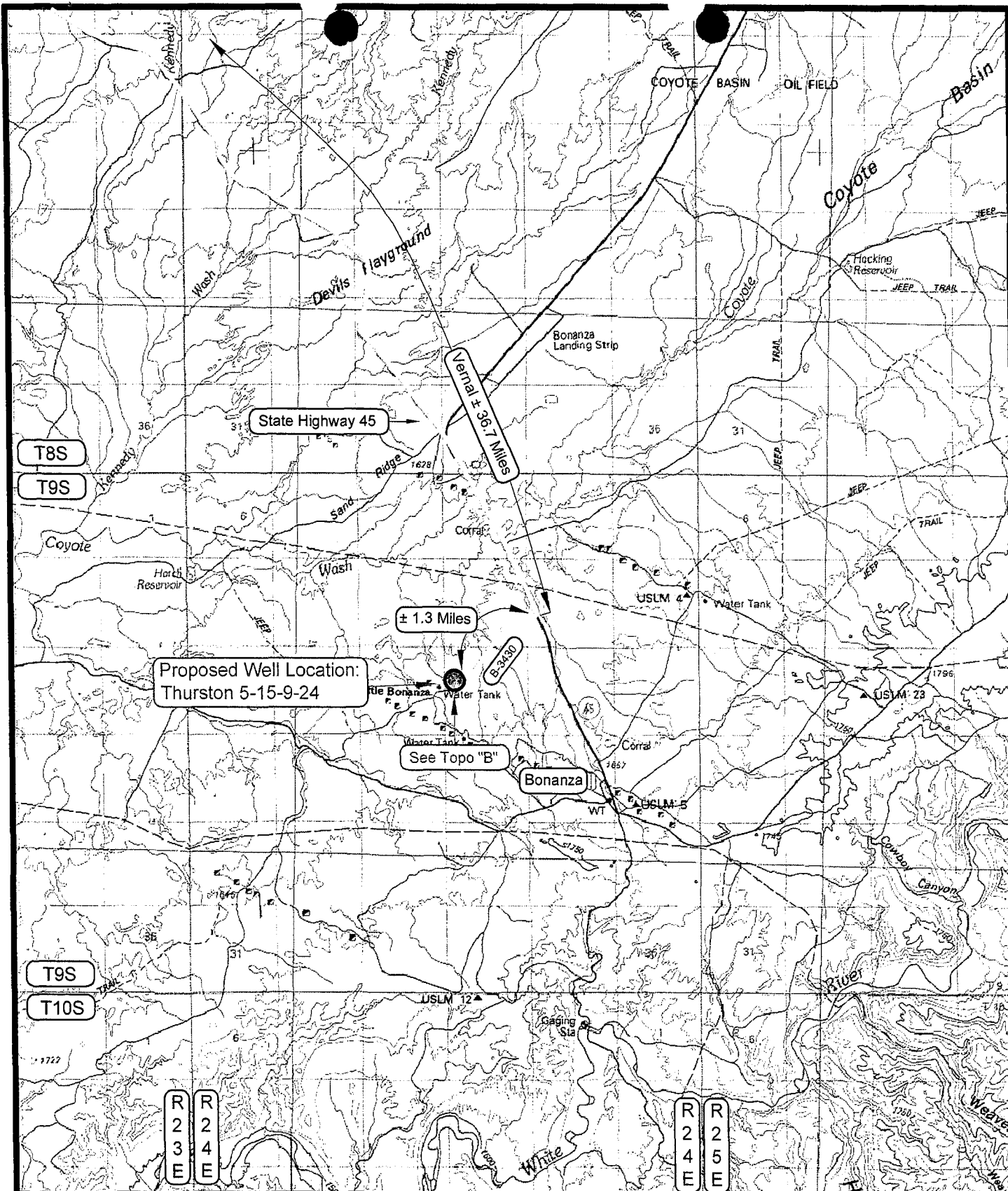
TYPICAL PRODUCTION LAYOUT

THURSTON 5-15-9-24



Section 15, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SW NW	Footage Location: 1963' FNL & 463' FWL
Date Surveyed: 10-15-05	Date Drawn: 11-1-05	Date Last Revision:	Timberline (435) 789-1365 <i>Land Surveying, Inc.</i> 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: K.R.K.	Drawn By: J.R.S.	Scale: 1" = 50'	

SHEET
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OF 10



LEGEND

- = PROPOSED WELL LOCATION
- = COUNTY ROAD CLASS & NUMBER
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD

TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 10-31-05

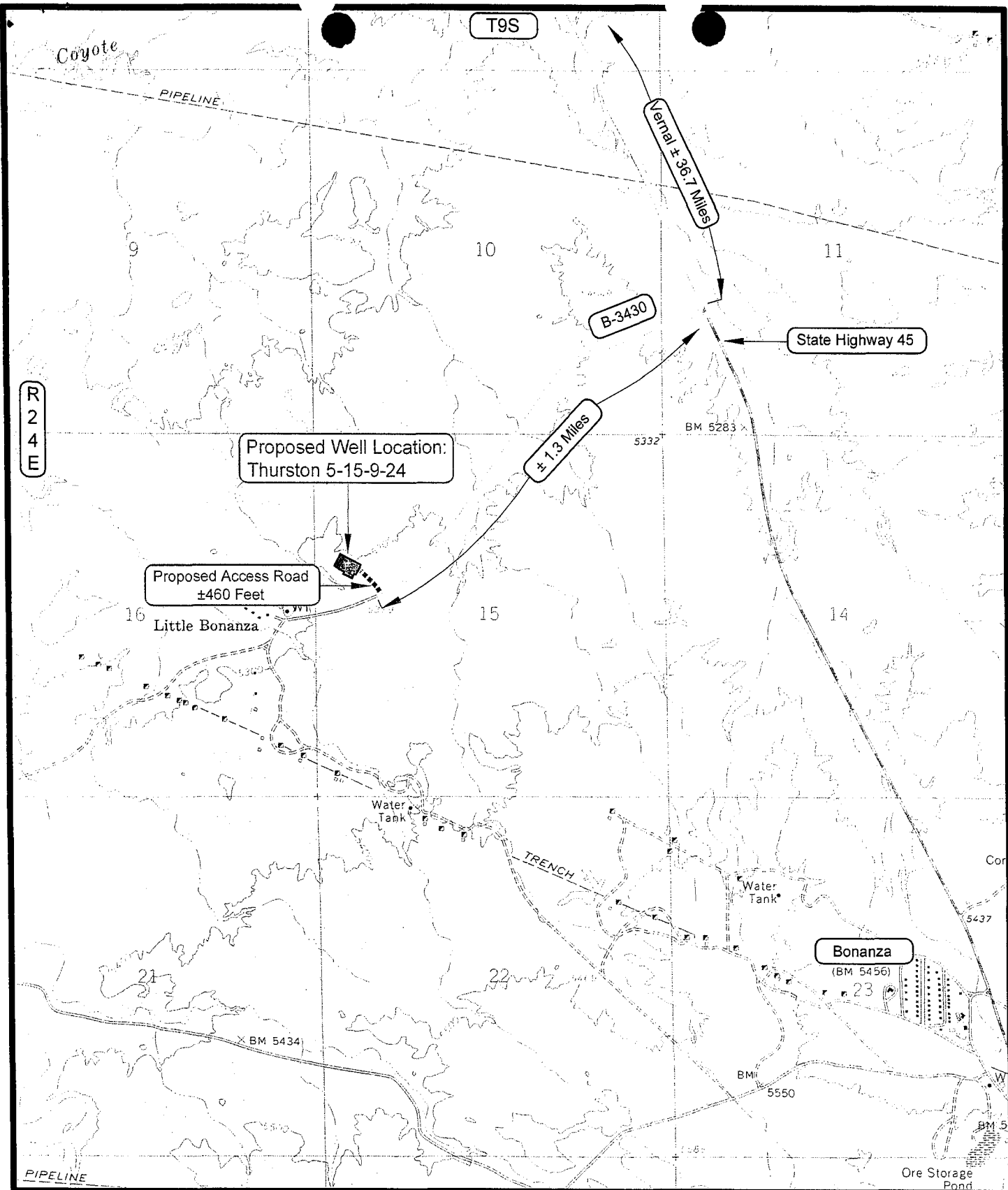
REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

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OF 10



LEGEND

- PROPOSED ACCESS ROAD
- ***** = SUBJECT WELL
- = SHARED ACCESS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- B-5460 = COUNTY ROAD CLASS & NUMBER
- = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-1-05

REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

Timberline Land Surveying, Inc.
 38 West 100 North Vernal, Utah 84078
 (435) 789-1365

SHEET
8
OF 10

T9S

5218

5168

Coyote

PIPELINE

R
2
4
EDirty Devil
U 1-9

Federal 14-10

Bonanza 2B-16

State 14-16

Bonanza 4D-16

Dirty Devil
31-15 AProposed Well Location:
Thurston 5-15-9-24

Little Bonanza

Thurston 10-15-9-24

Bonanza 14-16

Water
Tank

TRENCH

Water
TankBon
(BM)

5550

LEGEND

- | | |
|--------------------|--------------------------------|
| ○ = DISPOSAL WELL | ⊗ = WATER WELL |
| ● = PRODUCING WELL | ● = ABANDONED WELL |
| ● = SHUT IN WELL | ● = TEMPORARILY ABANDONED WELL |
| ○ = PROPOSED WELL | ⊕ = ABANDONED LOCATION |

TOPOGRAPHIC MAP "C"

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-01-05

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

REVISED: 11-02-05 B.J.Z.

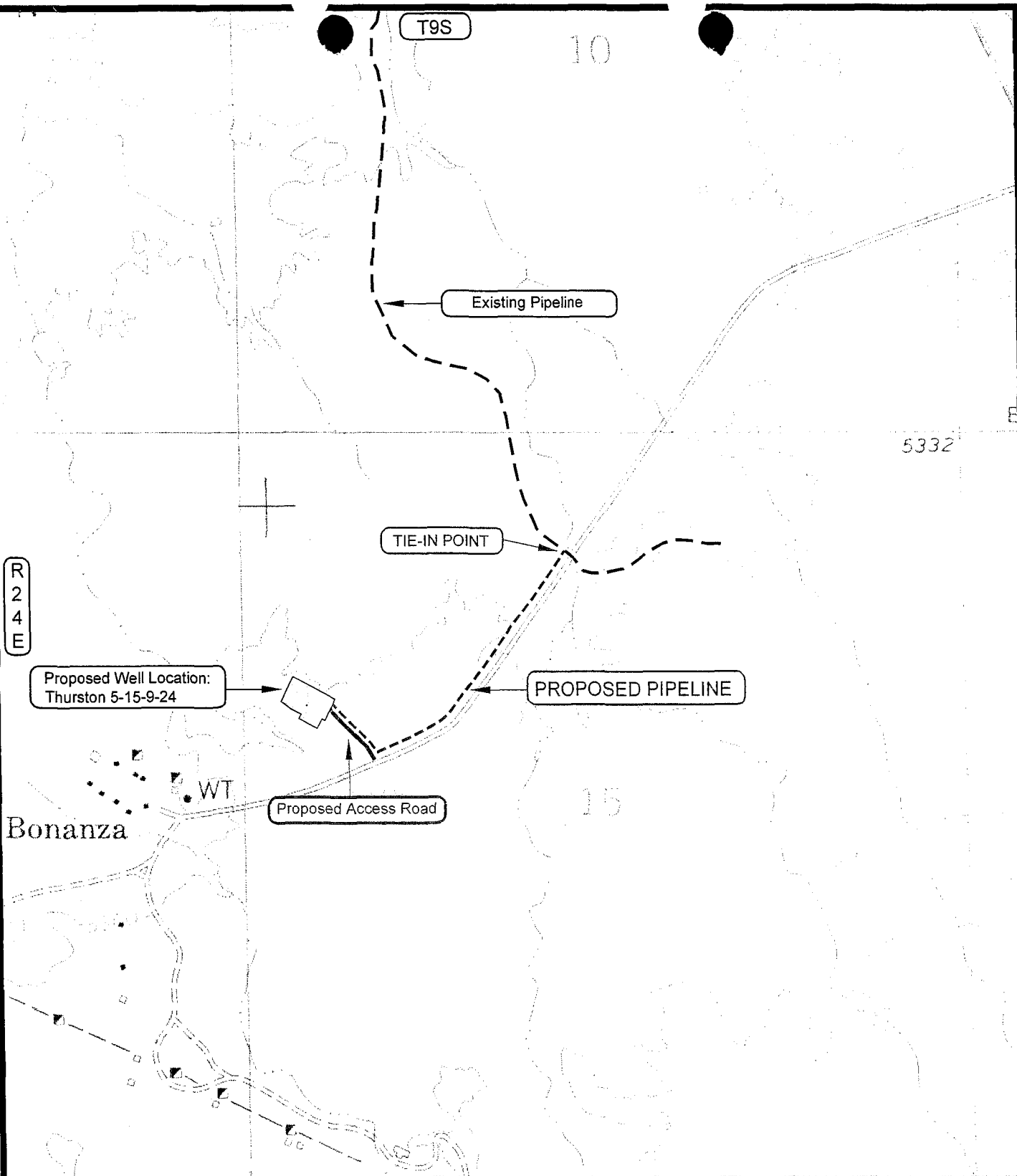
N

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24
SECTION 15, T9S, R24E, S.L.B.&M.
1963' FNL & 463' FWL

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SHEET
9
OF 10



APPROXIMATE PIPELINE LENGTH = 2,500 FEET

LEGEND

- = EXISTING PIPELINE
- = PROPOSED PIPELINE
- = PROPOSED ACCESS ROAD
- = LEASE LINE AND / OR PROPERTY LINE

TOPOGRAPHIC MAP "D"

DATE SURVEYED: 10-15-05

DATE DRAWN: 11-01-05

SCALE: 1" = 1000'

DRAWN BY: B.J.Z.

REVISED: 11-02-05 B.J.Z.

THURSTON ENERGY OPERATING COMPANY

Thurston 5-15-9-24

SECTION 15 , T9S, R24E, S.L.B.&M.

1963' FNL & 463' FWL

Timberline Land Surveying, Inc.

38 West 100 North Vernal, Utah 84078
(435) 789-1365

SHEET

10

OF 10

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 04/25/2007

API NO. ASSIGNED: 43-047-37405

WELL NAME: THURSTON 5-15-9-24

OPERATOR: THURSTON ENERGY (N2790)

PHONE NUMBER: 435-789-0968

CONTACT: BILL RYAN

PROPOSED LOCATION:

SWNW 15 090S 240E

SURFACE: 1963 FNL 0463 FWL

BOTTOM: 1963 FNL 0463 FWL

COUNTY: Uintah

LATITUDE: 40.03770 LONGITUDE: -109.2075

UTM SURF EASTINGS: 652931 NORTHINGS: 4433271

FIELD NAME: DEVILS PLAYGROUND (575)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DKD	5/16/07
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-28042

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: CSLGT

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat
☒ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 0269434510)
☒ Potash (Y/N)
☒ Oil Shale 190-5 (B) or 190-3 or 190-13
☒ Water Permit
(No. T75376)
☒ RDCC Review (Y/N)
(Date: 12/06/2005)
☒ Fee Surf Agreement (Y/N)
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: _____

☒ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

___ R649-3-3. Exception

___ Drilling Unit

Board Cause No: _____

Eff Date: _____

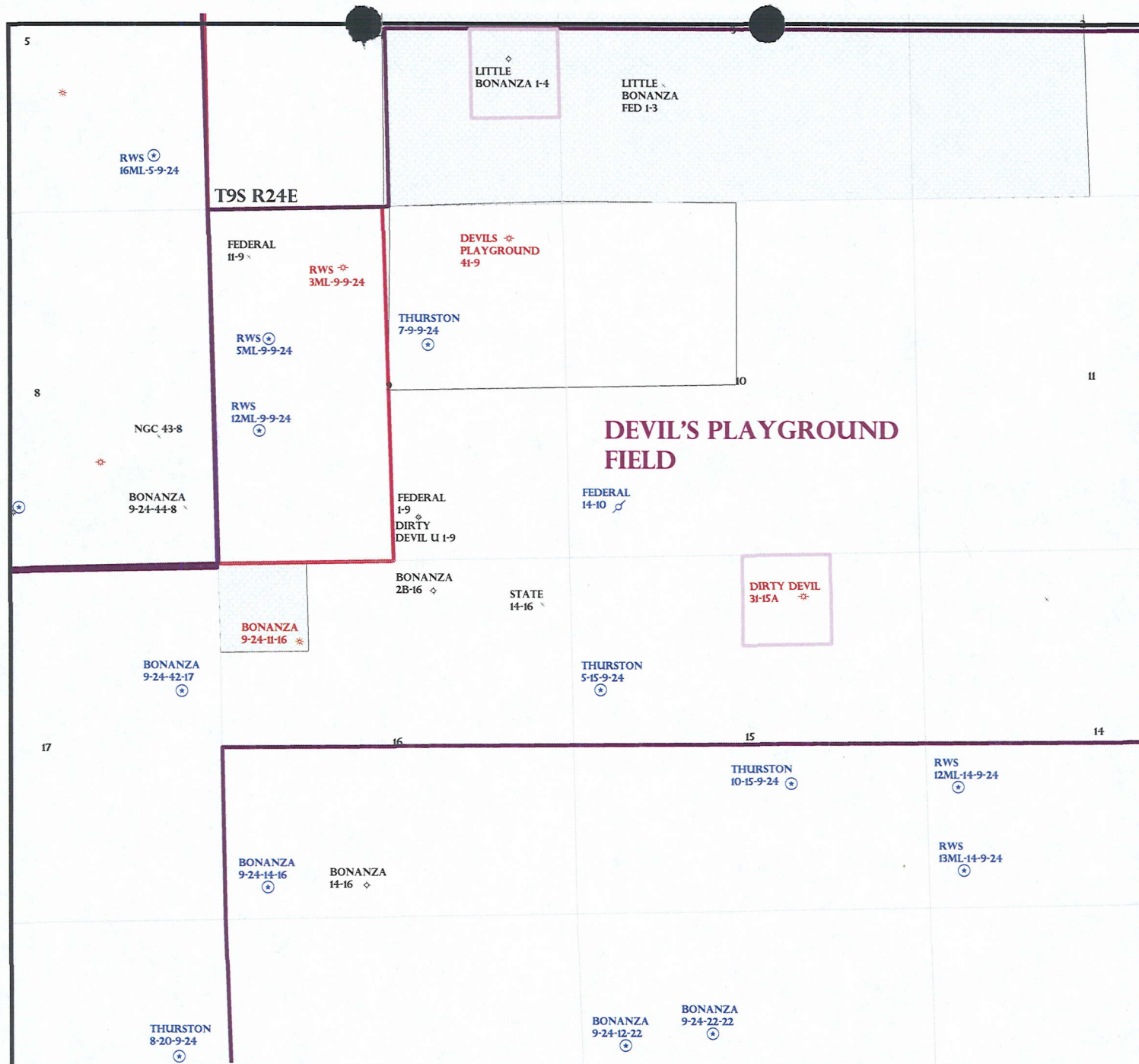
Siting: _____

___ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS:

1- Federal Approval
2- Spacing Strip
3- Surface Csg Cont Strip
4- Cement Strip #3 (5 1/2" production, 1800' md)
* 5- STATEMENT OF BASIS



OPERATOR: THURSTON ENERGY (N2790)

SEC: 9,15 T.9S R. 24E

FIELD: DEVILS PLAYGROUND (575)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

Field Status

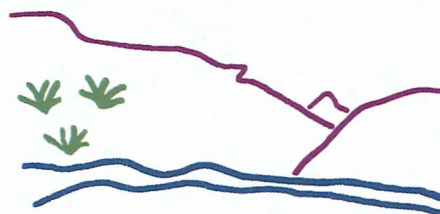
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING



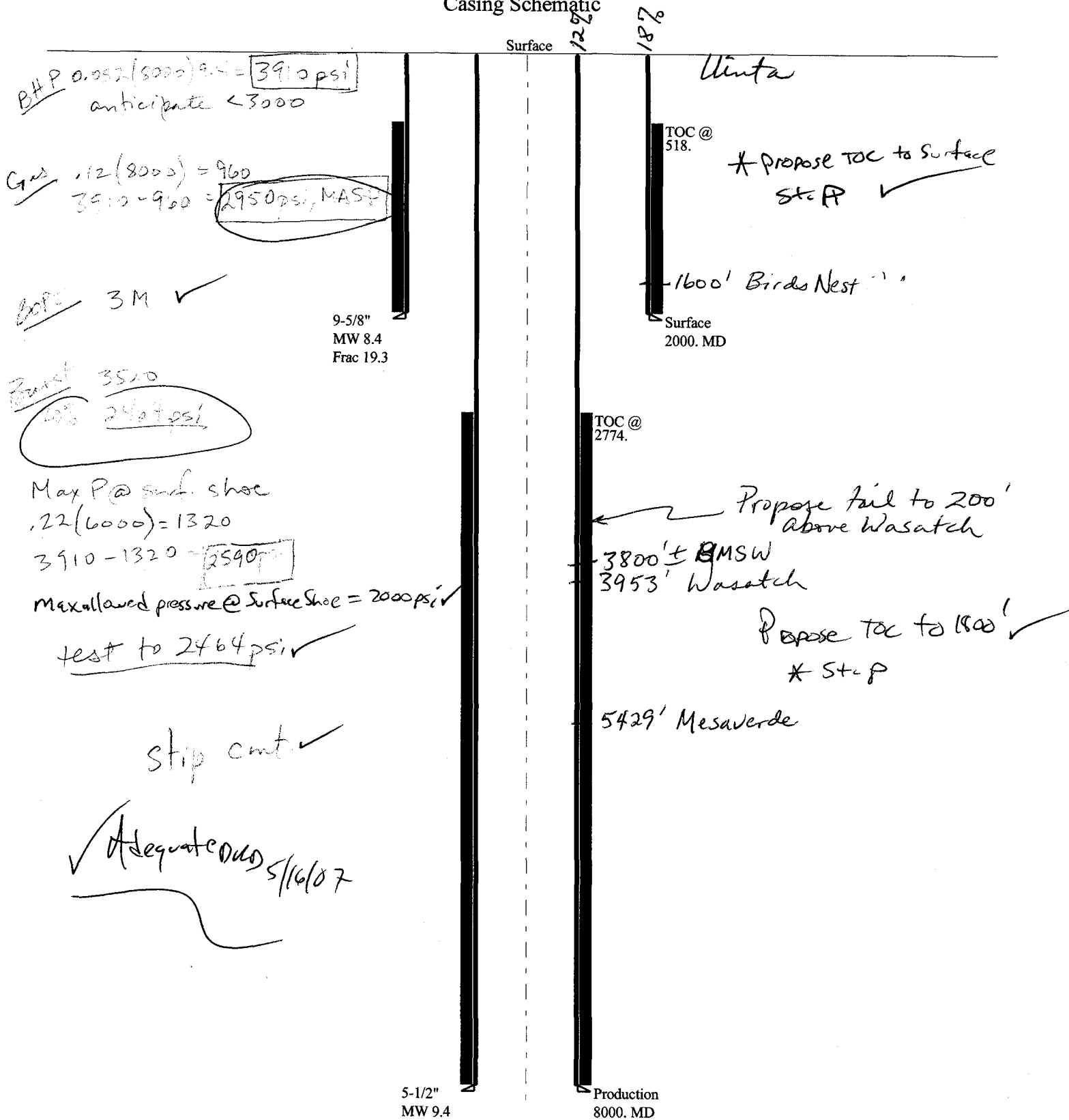
Utah Oil Gas and Mining



PREPARED BY: DIANA MASON
DATE: 3-MAY-2007

11-05 Thurston 5-15-9-24amd

Casing Schematic



Well name:

11-05 Thurston 5-15-9-24amdOperator: **Thurston Energy Operation**String type: **Surface**

Project ID:

43-047-37405Location: **Uintah County, Utah****Design parameters:****Collapse**Mud weight: 8.400 ppg
Design is based on evacuated pipe.**Minimum design factors:****Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 93 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 299 ft

Cement top: 518 ft

BurstMax anticipated surface
pressure: 1,760 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,000 psi

No backup mud specified.

Tension:8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)Tension is based on air weight.
Neutral point: 1,751 ft**Non-directional string.****Re subsequent strings:**Next setting depth: 8,000 ft
Next mud weight: 9.400 ppg
Next setting BHP: 3,906 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,000 ft
Injection pressure: 2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	9.625	36.00	J-55	ST&C	2000	2000	8.796	868.1
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	2020	2.315	2000	3520	1.76	72	394	5.47 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & MineralsPhone: (801) 538-5281
FAX: (801) 359-3940Date: May 9, 2007
Salt Lake City, Utah**ENGINEERING STIPULATIONS -**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:

11-05 Thurston 5-15-9-24amd

Operator: **Thurston Energy Operation**String type: **Production**

Project ID:

43-047-37405

Location: **Uintah County, Utah****Design parameters:****Collapse**Mud weight: 9.400 ppg
Design is based on evacuated pipe.**Minimum design factors:****Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 177 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 2,774 ft

BurstMax anticipated surface
pressure: 2,146 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 3,906 psi

No backup mud specified.

Tension:8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)**Non-directional string.**

Tension is based on air weight.

Neutral point: 6,860 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8000	5.5	17.00	N-80	LT&C	8000	8000	4.767	1044.2
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3906	6290	1.610	3906	7740	1.98	136	348	2.56 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & MineralsPhone: (801) 538-5281
FAX: (801) 359-3940Date: May 9, 2007
Salt Lake City, Utah**ENGINEERING STIPULATIONS -**

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

From: Gil Hunt
To: Ginger Stringham
Date: 4/26/2007 10:14:51 AM
Subject: Re: APD Expirations

Ginger,

It is my understanding that you have re-submitted the subject APDs and we will proceed to permit them using the same API numbers to minimize confusion. The wells that are located on BLM surface and State minerals will not require an onsite by us. I can't however speak for the BLM.

As you are aware, we are considerably busier than in the past and have had to adopt some different policies and procedures to optimize our time and resources to better serve the operators and public. We are required by Rule to issue drilling permits for a one-year period. We however, have a very simple and effective process for issuing extensions for up to two additional years. We also have made available a list of permit expiration dates sorted by company on our web site to assist you. It is my understanding that you were contacted more than once about the expiration of the subject APDs prior to them being rescinded.

I am sorry for any inconvenience this may have caused you. Please don't hesitate to contact us in the future if you have questions or concerns about drilling permits and their possible expiration.

Sincerely,

Gil Hunt
Associate Director, Oil & Gas
Utah Division of Oil, Gas & Mining
801-538-5297

>>> Ginger Stringham <gs_paradigm@yahoo.com> 04/25/2007 7:04 PM >>>
Gil,

Please find the attached letter.

Thank you,

Ginger Stringham

Ahhh...imagining that irresistible "new car" smell?
Check out new cars at Yahoo! Autos.

CC: Bill Ryan; Brad Hill; John Baza



State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

May 16, 2007

Thurston Energy Operating Company
P O Box 240
Vernal, UT 84078

Re: Thurston 5-15-9-24 Well, 1963' FNL, 463' FWL, SW NW, Sec. 15, T. 9 South,
R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37405.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal Office
SITLA

Operator: Thurston Energy Operating Company
Well Name & Number Thurston 5-15-9-24
API Number: 43-047-37405
Lease: ML-28042

Location: SW NW Sec. 15 T. 9 South R. 24 East

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
- 24 hours prior to spudding the well – contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
- Any changes to the approved drilling plan – contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office
 (801) 942-0873 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office
 (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
5. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
7. Surface casing shall be cemented to the surface.
8. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
9. Cement volume for the 5 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 1800' MD as indicated in the submitted drilling plan.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-28042
2. NAME OF OPERATOR: Thurston Energy Operating Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 290 South 800 East CITY Vernal STATE UT ZIP 84078		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1963' FNL & 463' FWL COUNTY: Uintah		8. WELL NAME and NUMBER: Thurston 5-15-9-24
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 15 9S 24E STATE: UTAH		9. API NUMBER: 4304737405
		10. FIELD AND POOL, OR WILDCAT: Bonanza

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Extension
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator respectfully requests a one year APD approval extension for the subject location.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 04-29-08
By:

COPY SENT TO OPERATOR

Date: 5.1.2008
Initials: KS

NAME (PLEASE PRINT) Ginger Bowden	TITLE Agent
SIGNATURE	DATE 4/24/2008

(This space for State use only)

RECEIVED
APR 28 2008
DIV. OF OIL, GAS & MINING



**Application for Permit to Drill
Request for Permit Extension
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

API: 4304737405
Well Name: Thurston 5-15-9-24
Location: Sec. 15, T9S, R24E SWNW
Company Permit Issued to: Thurston Energy Operating Company
Date Original Permit Issued: 1/23/2006

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☒

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

Minger Borden
Signature

4/24/2008
Date

Title: Agent

Representing: Thurston Energy Operating CO

RECEIVED
APR 28 2008
DIV. OF OIL, GAS & MINING



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

June 3, 2009

Thurston Energy Operating Co.
290 South 800 East
Vernal, UT 84078

Re: APD Rescinded – Thurston 5-15-9-24, Sec.15, T.9S, R.24E
Uintah County, Utah API No. 43-047-37405

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on January 23, 2006. On May 16, 2007 and on April 29, 2008, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective June 3, 2009.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Ed Bonner, SITLA

